



CITY OF NOTTINGHAM.

ANNUAL HEALTH REPORT

FOR

1908.

BY

PHILIP BOOBBYER, M.D.,


MEDICAL OFFICER OF HEALTH,

MEDICAL SUPERINTENDENT OF ISOLATION HOSPITALS,

SUPERINTENDENT MEDICAL OFFICER OF SCHOOLS.

Nottingham :

THOS. FORMAN AND SONS, SHERWOOD STREET.



Digitized by the Internet Archive
in 2018 with funding from
Wellcome Library

<https://archive.org/details/b29924388>

CITY OF NOTTINGHAM.

1908—1909.

HEALTH COMMITTEE.

COUNCILLOR JOHN ASHWORTH, MAYOR.

Chairman :—

ALDERMAN DABELL, M.R.C.S., J.P.

Vice-Chairman :—

COUNCILLOR SAMBORNE COOK, J.P.

ALDERMAN BENNETT, J.P.
(deceased).

„ FLEEMAN, J.P.

„ JELLEY, J.P.

„ WHITE.

COUNCILLOR FREDK. BALL.

„ BARNETT.

„ CLARKE.

COUNCILLOR ELLIOTT.

„ GREGG.

„ LLOYD.

„ MARLOW.

„ W. E. MORRIS.

„ PENDLETON, J.P.

„ SMALL.

„ WADE.

TO THE CHAIRMAN AND MEMBERS OF THE HEALTH COMMITTEE OF THE NOTTINGHAM CORPORATION.

GENTLEMEN,

The following Report for the year 1908 is the 20th Annual Health Report I have had the honour of preparing as Medical Officer of Health for Nottingham.

The population of the City at the middle of 1908 is estimated at 260,449, having increased according to this computation by 20,697 since the census of 1901, and by 46,572 since that of 1891.

The birth-rate of the City for 1908, calculated on the above estimate of population, was 26·6 per 1,000, a figure higher only by a very small fraction than the lowest rate on record, that of 1905.

The deaths during 1908 numbered 4,019, and were less by 480 than those for 1907, and by 266 than the average annual number for the 10 years, 1898–1907. This annual total, also, is the lowest since 1896. It corresponds to a death-rate per 1,000 living of 15·2, which is the lowest annual death-rate for Nottingham on record.

The deaths of infants under 1 year of age amounted to 1,026 only, and were less than those of any previous year since 1890. The proportion of such deaths per 1,000 births during the year was 145, the lowest infant death-rate on record.

The total number of deaths from the 7 principal epidemic diseases was 336, and was the smallest annual total of such deaths since the extension of the borough in 1877. This number is little more than half the average annual number for the past 10 years.

The deaths from measles, whooping-cough, and diarrhoea are the chief variables in this group. These numbered 266 in 1908, as compared with 489 in 1907. The deaths from scarlet fever, diphtheria, and enteric fever together amounted to 70 in 1908, as compared with 84 in 1907.

Of schemes directed to the improvement of the public health, those which still attract most attention with us at the present time are probably (*a*) the medical inspection of the children of Public Elementary Schools, (*b*) the visitation and instruction of recent mothers in connection with the Notification of Births Act, and (*c*) the inspection and improvement of working-class dwellings. These three, moreover, cover so much common ground that their association is peculiarly appropriate.

The improvement of the conditions of life generally among the poor in both town and country, constitutes a task of such magnitude and complexity as to dwarf by comparison all other schemes of improvement. The complexity of the task is its most salient feature, and yet the one most readily forgotten or ignored by many advocates of housing schemes.

The obvious necessity of bettering the poor home from within as well as from without, of amending life and manners as well as bricks and mortar, involves the inclusion, in every properly organised scheme, of various subsidiary agencies directed to this first end. Of all such agencies hitherto created, there are not any better calculated to promote the much needed social and sanitary improvement of the poor than the two I have cited, viz., school inspection combined with judicious home visitation, and the helping of poor mothers to rear in health and vigour the infant hope of the race.

The organization of special preventive measures against tuberculosis, and the substitution of water-carriage for the existing dry system of excrement disposal, are reforms which belong to the same category as the above, in that they are mainly required for the benefit of the poorer classes of the community. I need hardly remind you once more that neither of these reforms has yet been seriously taken in hand.

PHILIP BOOBBYER.

TABLE I.

Nottingham. Population, Inhabited Houses, Marriages, Births and Deaths for 1908, and for the 10 years 1898-1907.

	Estimated Population.	Inhabited Houses.	† Marriages	Births.	Deaths.			Deaths in Public Institutions.
					Total at all ages.	Under One Year.	Under 5 Years.	
1908	260,449	61,887	2195	7037	4019	1026	1371	766
1907	257,492	60,963	2403	6882	4499	1154	1696	833
1906	254,567	59,828	2387	6759	4069	1158	1477	764
1905	251,677	58,902	2077	6645	4142	1031	1580	761
1904	248,811	58,000	2057	6880	4314	1239	1666	816
1903	245,985	56,784	2287	6945	4063	1144	1590	789
1902	243,191	55,240	2256	6867	4118	1101	1382	666
1901	240,438	53,107	2255	6801	4346	1330	1774	791
1900	* 237,770	52,537	2153	6731	4555	1314	1811	770
1899	239,384	53,052	2037	6910	4689	1470	1954	802
1898	236,137	52,051	1912	6796	4058	1209	1689	636
Average of the ten years 1898-1907.	245,545	56,046	2182	6822	4285	1215	1662	763

* Retrospective estimate based upon Census Return of April, 1901.

Estimates for years 1898—1899 based upon hypothesis that rate of increase between 1881 and 1891 had continued during succeeding decennium.

† The returns of Marriages, from June 1899 onwards, are for the entire municipal area—the new Parish of Nottingham: prior to this, they did not include those of Bulwell, Basford, and North Wilford.

TABLE II.

Nottingham. Annual Rates for 1908, and the 10 years 1898-1907.

	Rate per 1000 of Population.		Per 1000 Births Deaths under 1 year.	Per 1000 of Total Deaths.		Deaths in Public Insti- tutions.
	Birth Rate.	Death Rate.		Deaths under 1 year.	Deaths under 5 years.	
1908	27.02*	15.43*	146	255	341	191
1907	26.7	17.47	168	256	377	185
1906	26.55	15.98	171	285	363	188
1905	26.5	16.45	155	249	381	184
1904	27.7	17.34	176	287	386	189
1903	28.3	16.5	165	282	391	194
1902	27.3	16.7	159	267	336	190
1901	28.3	18.1	196	306	408	182
1900	28.3	19.2	196	288	398	169
1899	28.8	19.6	213	313	417	168
1898	28.8	17.2	178	298	416	157
Average of the ten years 1898-1907.	27.77	17.45	178	283	387	181

* These rates are calculated on the mid-year population without correction for the 53rd week contained in 1908. When so corrected they fall to 26.6 and 15.2 respectively.

TABLE III. Schedule A—Nottingham. 190

No.	DISEASES.	AGES.									
		0-		1-		5-		10-		15-	
		M	F	M	F	M	F	M	F	M	F
1	Small-pox (a) Vaccinated .. ..	..	..	..	..	..	..	..	..	..	..
	(b) Unvaccinated .. ..	..	..	..	..	..	..	..	..	..	..
	(c) No Statement .. ..	..	..	..	..	..	..	..	..	..	..
2	Measles	7	2	13	7	1	..	..	..	..	..
3	Scarlet Fever .. ..	..	..	3	2	2	3	..	..	..	..
4	Typhus Fever .. ..	..	..	..	..	..	..	..	..	..	..
5	Epidemic Influenza .. ..	..	..	..	1	..	..	..	..	..	1
6	Whooping-Cough	16	12	17	18	..	1	..	..	..	..
7	Diphtheria	2	..	6	5	6	8	1	..	..	..
8	Enteric Fever .. ..	..	..	..	..	1	3	2	4	1	..
9	Asiatic Cholera .. ..	..	..	..	..	..	..	..	..	..	..
10	Diarrhoea, Dysentery	60	52	9	3	..	..	1	..	..	..
11	Epidemic Enteritis	18	12	2	4	..	..	..	..	..	..
12	Chicken-Pox .. ..	..	..	..	1	..	..	..	..	..	..
13	Epidemic Cerebro-Spinal Meningitis .. ..	..	..	1	..	..	..	..	..	..	..
14	<i>Other allied Diseases</i> .. ..	..	..	..	..	..	..	..	..	..	..
15	Hydrophobia .. ..	..	..	..	..	..	..	..	..	..	..
16	Glanders .. ..	..	..	..	..	..	..	..	..	..	..
17	Tetanus .. ..	..	1	..	..	..	..	..	..	..	..
18	Anthrax .. ..	..	..	..	..	..	..	..	..	..	..
19	Cowpox .. ..	..	..	..	..	..	..	..	..	..	..
20	Syphilis	7	4	..	..	..	..	..	..	..	..
21	Gonorrhoea .. ..	..	..	..	..	..	..	..	..	..	..
22	Phagedæna .. ..	..	..	..	..	..	..	..	..	..	..
23	Erysipelas .. ..	..	..	..	1	..	..	..	..	..	..
24	Puerperal Sepsis .. ..	..	..	..	..	..	..	..	..	..	..
25	Pyæmia	2	2	..	..	..	..	..	1	..	..
26	Infective Endocarditis .. ..	..	..	..	..	..	..	..	..	..	..
27	<i>Other Allied Diseases</i> .. ..	..	..	..	..	..	..	..	..	..	..
28	Cancrum Oris .. ..	..	..	..	..	..	..	..	..	..	..
29	Malarial Fever .. ..	..	..	..	..	..	..	..	..	..	..
30	Rheumatic Fever .. ..	..	..	2	..	..	2	3	2	2	..
31	Rheumatism of Heart .. ..	..	..	..	2	..	..	..	1	..	..
32	Tuberculosis of Brain	11	4	15	12	3	2	..	2	1	..
33	Tuberculosis of Larynx .. ..	..	..	..	..	..	..	..	..	..	..
34	Phthisis	1	..	4	3	2	4	..	3	8	..
35	Abdominal Tuberculosis	4	3	6	4	3	3	1	1	1	..
36	General Tuberculosis	4	1	1	3	2	1	..	1	..	..
37	Other forms Tuberculosis .. ..	..	..	..	1	1	..	1	..	..	..
38	Tuberculous Joints .. ..	..	..	..	..	..	..	..	..	1	..
39	Tuberculous Spinal Caries .. ..	..	..	..	..	1	..	..	..	..	..
40	<i>Other Infective Diseases</i> .. ..	..	..	..	..	..	..	..	..	..	..
41	Thrush	1	1	..	..	..	..	..	..	..	..
42	Actinomycosis .. ..	..	..	..	..	..	..	..	..	..	..
43	Hydatid Diseases .. ..	..	..	..	..	..	..	..	..	..	..
44	Scurvy .. ..	..	..	..	..	..	..	..	..	..	..
45	<i>Other Diseases due to Altered Food</i> .. ..	..	..	..	..	..	..	..	..	..	..
46	Acute Alcoholism .. ..	..	..	..	..	..	..	..	..	..	..
47	Chronic Alcoholism .. ..	..	..	..	..	..	..	..	..	..	..
48	<i>Chronic Industrial Poisonings</i> .. ..	..	..	..	..	..	..	..	..	..	..
49	<i>Other Chronic Poisonings</i> .. ..	..	..	..	..	..	..	..	..	..	..
50	Osteo-myelitis .. ..	..	..	..	..	..	..	..	..	..	..
51	Osteo-Arthritis .. ..	..	..	..	..	..	..	..	..	..	..
52	Gout .. ..	..	..	..	..	..	..	..	..	..	..
53	Sarcoma .. ..	..	..	..	..	1	..	..	..	2	..
	TOTALS	133	94	79	67	23	27	9	15	17	..

aths Registered from all causes.

AGES.																ALL AGES.		TOTALS.
0-	25-		35-		45-		55-		65-		75-		85-		M	F		
F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
..		
..		
..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	21	10
..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	5	6
..	2	1	1	2	1	2	7	3	5	6	7	5	1	1	25	21		
..	33	31		
1	15	15		
1	2	3	6	1	2	..	1	..	..	..	..	..	..	..	17	12
..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	1	1	2	4	1	..	75	60		
..	20	16		
..	1		
..	1	..		
..		
..		
..	1		
..		
..	1	..	..	..	..	..	..	..	8	4		
..		
..	..	1	..	..	1	..	1	..	3	..	..	1	..	..	6	2
1	..	5	..	3	..	..	2	..	..	..	..	..	..	..	..	9
..	1	1	2	2	1	2	1	1	..	..	..	8	9		
..		
1	1		
..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	1	1	1	1	..	1	..	..	..	..	..	..	10	8		
..	1	..	1	..	..	..	5		
..	1	..	..	..	1	..	..	..	..	..	..	..	32	20		
..	1	..	3	..	..	..	1	..	..	..	..	..	5	..		
17	49	34	45	29	38	20	29	11	11	2	..	1	..	..	203	132
1	1	..	..	..	..	1	2	..	..	..	..	..	..	..	18	14
..	1	..	1	1	..	..	..	..	..	..	..	..	9	7		
..	1	..	..	..	..	..	..	2	2		
2	1	2		
..	1	..	..	..	..	..	..	..	..	..	..	..	2	..		
..	1	1		
..		
..		
..		
..	1	1	..	..	2	..	..	..	..	..	..	..	3	1		
..	1	..	3	3	..	2	..	..	..	..	..	..	4	5		
..		
..		
..	1	..	..	..	..	..	..	..	..	..	1	..		
..	1	..	1	..	2	..	..	..	..	..	..	..	4		
..	1	..	1	1	..	..	..	1	..	..	2	2		
1	1	..	3	1	3	3	4	5	2	1	..	1	..	..	19	13
25	57	45	63	40	56	34	51	27	25	12	10	14	2	1	546	414		

TABLE III. Schedule A—Nottingham. 1900

No.	DISEASES.	AGES.									
		0-		1-		5-		10-		15-	
		M	F	M	F	M	F	M	F	M	F
54	Cancer .. ..	..	..	..	..	..	..	..	..	..	..
55	Diabetes Mellitus .. ..	..	..	..	..	1	1	..	..	1	..
56	Purpura Hæmorrhagica .. ..	..	..	..	..	..	..	..	..	..	..
57	Hæmophilia .. ..	..	..	..	..	..	..	..	..	..	..
58	Anæmia	1	..	1	..	..	..	..	..	..	..
59	Lymphadenoma .. ..	..	..	..	..	1	..	..	..	..	..
60	Premature Birth	101	85	..	..	..	..	..	..	..	..
61	Injury at Birth	5	2	..	..	..	..	..	..	..	..
62	Debility at Birth	27	23	..	..	..	..	..	..	..	..
63	Atelectasis	13	9	..	..	..	..	..	..	..	..
64	<i>Congenital Defects</i>	28	19	2	2	2	2	..	1	..	..
65	Want of Breast Milk	3	1	..	..	..	..	..	..	..	..
66	Atrophy, Debility, Marasmus	44	43	6	2	..	..	..	..	..	..
67	Dentition	7	2	4	1	..	..	..	..	..	..
68	Rickets .. ..	..	..	1	2	..	1	..	..	..	..
69	Old Age, Senile Decay .. ..	..	..	..	..	..	..	..	..	..	..
70	Convulsions	39	14	3	6	..	2	..	..	..	..
71	Meningitis	6	5	5	2	2	3	2	1	..	..
72	Encephalitis	1	..	1	..	..	..	..	..	..	..
73	Apoplexy .. ..	..	..	..	..	..	..	..	..	..	2
74	Softening of Brain .. ..	..	..	..	..	..	..	..	..	..	..
75	Hemiplegia .. ..	..	..	..	..	..	..	..	..	..	..
76	Genrl. Paralysis of Insane .. ..	..	..	..	..	..	..	..	..	..	..
77	Other forms of Insanity .. ..	..	..	..	..	..	1	..	..	..	..
78	Chorea .. ..	..	..	..	..	..	..	..	1	..	..
79	Cerebral Tumour	1	..	..	..	..	..	..	..	..	..
80	Epilepsy .. ..	..	..	1	1	1	..	1	1	1	..
81	Laryngismus Stridulus .. ..	..	..	..	..	..	..	..	..	..	..
82	Locomotor Ataxy .. ..	..	..	..	..	..	..	..	..	..	..
83	Paraplegia .. ..	..	..	..	..	..	..	..	..	..	..
84	Peripheral Neuritis .. ..	..	..	..	..	..	..	..	..	..	..
85	Multiple Neuritis .. ..	..	..	..	..	..	..	..	..	..	..
86	Disseminated Sclerosis .. ..	..	..	..	..	..	..	..	..	..	..
87	Melancholia .. ..	..	..	..	..	..	..	..	..	..	..
88	Bulbar Paralysis .. ..	..	..	..	..	..	..	..	..	..	..
89	Paralysis Agitans .. ..	..	..	..	..	..	..	..	..	..	..
90	<i>Other forms, Brain Diseases</i> .. ..	..	..	..	..	..	..	..	..	..	..
91	Otitis	1	..	1	1	..	..	..	..	..	..
92	Disease of Nose, Epistaxis .. ..	..	..	..	..	..	..	..	..	..	..
93	Diseases of Eye .. ..	..	..	..	..	..	..	..	..	..	..
94	Pericarditis .. ..	..	..	..	..	..	1	..	1	..	..
95	Endocarditis .. ..	..	..	..	..	..	..	..	1	2	..
96	Hypertrophy of Heart .. ..	..	..	..	..	..	..	..	..	..	..
97	Angina Pectoris .. ..	..	..	..	..	..	..	..	..	..	..
98	Aneurism .. ..	..	..	..	..	..	..	..	..	..	..
99	Arterio Sclerosis .. ..	..	..	..	..	..	..	..	..	..	..
100	Senile Gangrene .. ..	..	..	..	..	..	..	..	..	..	..
101	Embolism, Thrombosis .. ..	..	..	..	..	..	..	..	..	..	..
102	Phlebitis .. ..	..	..	..	..	..	..	..	..	..	..
103	Varicose Veins .. ..	..	..	..	..	..	..	..	..	..	..
104	<i>Other Diseases, Heart and Vessels</i> .. ..	..	..	1	..	..	..	..	..	..	..
105	Laryngitis .. ..	..	..	2	..	1	..	..	..	..	..
106	Tonsillitis	1	..	..	..	..	..	..	..	..	..
107	Croup .. ..	..	1	..	..	..	..	..	..	..	..
108	<i>Other Diseases, Larynx and Trachea</i> .. ..	..	..	..	..	..	..	..	..	..	..
TOTALS		278	204	28	17	8	11	3	6	6	..

aths Registered from all causes—continued.

AGES.															ALL AGES.		TOTALS.
F	25-		35-		45-		55-		65-		75-		85-		M	F	
1	2	3	6	24	20	38	14	41	22	34	8	8	..	1	72	150	222
..	..	1	1	3	4	2	7	3	4	3	1	2	..	1	19	16	35
..
..
1	1	2	4	4	2	2	3	1	1	2	..	..	14	12	26
..	1	..	..	..	..	..	..	..	..	..	2	..	2
..	101	85	186
..	5	2	7
..	27	23	50
..	13	9	22
..	32	25	57
..	3	1	4
..	50	45	95
..	11	3	14
..	1	3	4
..	13	14	32	59	14	22	59	95	154
..	1	..	..	42	23	65
..	2	..	..	1	1	..	..	..	..	..	..	..	18	13	31
..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	3	1	4
..	1	..	3	..	8	13	20	23	30	28	19	16	5	3	88	83	171
..	1	2	..	2	..	3	2	4	1	..	..	11	4	15
..	1	..	1	..	..	..	3	4	1	5	..	1	6	10	16
..	1	..	9	..	6	2	..	..	1	..	..	2	..	..	17	4	21
..	3	..	1	..	..	..	5	5
..	1	1
..	1	..	1
..	1	6	2	1	3	2	1	..	..	..	..	..	..	..	12	12	24
..
..	1	1	..	1	..	..	1	..	..	..	..	..	2	2	4
..	3	..	1	..	..	..	..	1	..	3	..	..	4	4	8
..	2	1	1	..	1	..	..	..	..	1	4	5
..	2	..	..	..	..	..	..	..	..	..	..	..	2	2
..	1	1	1	..	1	..	..	..	2	..	..	..	..	..	5	1	6
..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	1	..	..	..	..	..	1	..	1
..	1	..	..	..	..	..	..
..	2	1	3
..
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
..	1	3	4
2	4	7	11	5	27	27	31	29	19	38	11	14	..	2	107	127	234
..	1	..	..	..	..	1	3	3	2	..	2	1	..	..	8	5	13
..	1	..	..	2	1	1	..	..	..	..	2	3	5
..	1	1	4	..	3	1	1	1	..	..	..	..	9	3	12
..	1	..	1	2	..	..	..	..	..	2	2	4
..	1	..	2	1	4	4	6	1	..	2	13	8	21
..	1	1	1	2	..	6	4	3	..	1	..	..	6	13	19
..	1	..	..	..	..	..	1	..	1
..	1	..	..	..	..	..	..	..	..	..	1	1
1	..	4	3	4	9	6	10	14	20	25	14	25	2	3	59	82	141
..	3	..	3
..	1	..	1
..	1	1
..	1	..	..	..	..	..	..	..	1	..	1
5	11	24	47	45	94	103	99	127	137	163	101	142	21	35	837	887	1724

TABLE III. Schedule A—Nottingham. 1900

No.	DISEASES.	AGES.									
		0—		1—		5—		10—		15—	
		M	F	M	F	M	F	M	F	M	F
109	Acute Bronchitis	37	40	10	13	1	..	..	..	1	..
110	Chronic Bronchitis .. ..	..	..	..	..	..	..	..	..	..	..
111	Lobar Pneumonia	13	12	8	11	1	3	2	1	1	..
112	Lobular Pneumonia	45	32	32	42	2	1	..	2	1	..
113	Pneumonia .. ..	..	..	..	2	..	1	..	..	..	..
114	Emphysema, Asthma .. ..	..	..	..	..	..	1	..	..	..	..
115	Pleurisy .. ..	..	..	2	..	..	..	..	..	1	..
116	<i>Other Diseases, Respiratory System</i> .. ..	..	..	..	..	..	..	..	..	..	..
117	<i>Diseases of Mouth and Annexa</i> .. ..	..	..	..	..	..	..	..	..	..	..
118	Diseases of Pharynx .. ..	..	..	..	..	..	..	..	..	..	..
119	Diseases of Oesophagus .. ..	..	..	..	..	..	..	..	..	..	..
120	Ulcer of Stomach and Duodenum .. ..	..	..	..	..	..	..	..	..	1	..
121	Other Diseases of Stomach	23	14	..	2	..	..	..	..	1	..
122	Enteritis	30	18	2	4	1	..	..	..	..	..
123	Appendicitis	1	..	1	..	..	3	1	..	3	..
124	Obstruction of Intestine	4	2	..	..	..	..	..	..	1	..
125	Other Diseases of Intestine .. ..	..	..	..	..	..	..	..	..	..	..
126	Pancreatitis .. ..	..	..	..	..	..	..	..	..	..	..
127	Cirrhosis of Liver .. ..	..	..	..	..	..	..	..	..	..	..
128	Acute Yellow Atrophy of Liver .. ..	..	..	..	..	..	..	..	..	..	..
129	Gall Stones .. ..	..	..	..	..	..	..	..	..	..	..
130	Other Diseases of Liver .. ..	..	..	..	..	..	..	..	..	..	..
131	Peritonitis .. ..	..	..	..	..	..	..	1	1	..	..
132	Fistula in Ano .. ..	..	..	..	..	..	..	..	..	..	..
133	Ischio-Rectal Abscess .. ..	..	1	..	..	..	..	..	..	..	..
134	<i>Other Diseases, Digestive System</i> .. ..	..	..	..	..	..	..	..	..	..	..
135	<i>Diseases, Lymphatic System and Glands</i> .. ..	..	..	..	1	..	..	..	..	..	..
136	Addison's Disease .. ..	..	..	..	..	..	..	..	..	..	..
137	Acute Nephritis .. ..	..	..	..	1	..	1	2	..	..	..
138	Bright's Disease .. ..	..	..	..	..	..	..	..	..	1	..
139	Calculus .. ..	..	..	..	..	..	..	..	..	..	..
140	Diseases of Bladder and Prostate .. ..	..	..	..	..	..	..	..	..	..	..
141	<i>Other Diseases, Urinary System</i> .. ..	..	..	..	..	..	..	..	..	..	..
142	Stricture of Urethra .. ..	..	..	..	..	..	..	..	..	..	..
143	Urinary Fistula .. ..	..	..	..	..	..	..	..	..	..	..
144	Diseases of Testis & Penis .. ..	..	..	..	..	..	..	..	..	..	..
145	Diseases of Ovaries .. ..	..	..	..	..	..	..	..	..	..	..
146	Diseases of Uterus and Appendages .. ..	..	..	..	..	..	..	..	..	..	..
147	Diseases of Vagina and External Genitals .. ..	..	..	..	..	..	..	..	..	..	..
148	Diseases of Breast .. ..	..	..	..	..	..	..	..	..	..	..
149	Abortion, Miscarriage .. ..	..	..	..	..	..	..	..	..	..	..
150	Puerperal Mania .. ..	..	..	..	..	..	..	..	..	..	..
151	Puerperal Convulsions .. ..	..	..	..	..	..	..	..	..	..	..
152	Placenta Prævia, Flooding .. ..	..	..	..	..	..	..	..	..	..	..
153	Tubal Pregnancy .. ..	..	..	..	..	..	..	..	..	..	..
154	Puerperal Thrombosis .. ..	..	..	..	..	..	..	..	..	..	..
155	Rupture of Uterus .. ..	..	..	..	..	..	..	..	..	..	..
156	<i>Other Diseases, Pregnancy and Childbirth</i> .. ..	..	..	..	..	..	..	..	..	..	..
157	Arthritis, Ostitis, Periostitis .. ..	..	..	..	..	..	..	..	1	..	..
158	<i>Other Diseases, Osseous System</i> .. ..	..	..	..	..	..	..	..	..	..	..
159	Abscess .. ..	..	..	..	..	1	..	..	..	..	..
160	Ulcer, Bedsore .. ..	..	..	..	..	..	..	..	..	..	..
161	Eczema	1	1	..	..	..	..	..	..	..	..
162	Pemphigus .. ..	..	..	..	2	..	..	..	..	..	..
163	Acute Dermatitis	1	..	..	..	..	..	..	..	..	..
TOTALS		155	120	55	78	6	10	6	5	11	..

Deaths Registered from all causes—continued.

AGES.															ALL AGES.		TOTALS.
F	25-		35-		45-		55-		65-		75-		85-		M	F	
..	1	1	3	4	7	7	15	13	18	29	17	23	3	6	113	136	249
..	..	..	2	4	2	6	13	16	24	34	24	22	..	6	65	88	153
..	4	3	10	5	12	3	13	7	8	7	1	4	..	..	76	57	133
2	1	2	1	1	3	1	2	4	6	3	1	4	..	1	94	95	189
..	..	..	..	..	2	..	..	1	..	3	..	..	..	1	2	8	10
1	..	..	1	..	..	..	3	1	..	3	..	1	1	..	5	7	12
..	2	..	1	2	1	..	2	..	..	1	..	1	..	..	9	4	13
..
..
..
1	1	2	1	1	3	..	1	1	1	2	1	..	..	..	10	8	18
..	..	..	..	2	..	1	4	1	..	2	1	..	..	..	29	23	52
..	1	..	..	..	..	1	1	3	1	2	..	1	1	1	37	30	67
1	..	2	1	1	..	..	..	..	..	2	..	..	..	..	7	9	16
..	1	1	1	..	..	1	3	4	1	1	1	2	..	1	12	12	24
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1
..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
..	..	1	1	3	5	3	3	6	2	..	1	..	..	..	12	13	25
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1
..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1
..	..	..	..	..	..	1	..	1	..	1	..	..	..	..	..	3	3
..	1	..	..	2	..	1	..	..	..	..	..	..	..	..	2	4	6
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1
1	2	..	2	1	5	1	3	3	1	2	..	..	..	..	15	10	25
..	..	2	4	8	10	9	6	7	8	9	4	1	..	1	33	38	71
..	..	..	1	..	..	1	2	..	..	..	..	..	..	..	3	1	4
..	..	..	2	..	2	1	1	..	6	..	3	..	..	..	14	1	15
..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	2	1	3
..	..	..	..	..	2	..	..	..	2	..	..	..	..	..	4	..	4
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1
..
..	..	..	..	1	..	1	..	3	..	..	..	..	..	..	..	5	5
1	..	2	..	3	..	1	..	..	..	..	..	1	..	..	..	8	8
..
..
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1
1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2
1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	3	3
..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
..
..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
1	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	4	4
..	..	..	..	1	1	..	..	..	..	1	1	1	..	..	2	5	7
..
..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
10	15	24	31	45	56	40	73	71	78	104	55	61	5	17	550	590	1140

TABLE III. Schedule A—Nottingham. 190

No.	DISEASES.	AGES.									
		0—		1—		5—		10—		15—	
		M	F	M	F	M	F	M	F	M	F
164	<i>Other Diseases, Integumentary System</i> ..	..	..	..	..	..	..	..	..	..	..
165	<i>Accidents and Negligence :</i> .. ..	..	..	..	..	..	..	..	..	..	..
166	In Dwelling .. ..	..	..	..	..	..	..	..	..	..	..
167	In Mines and Quarries .. ..	..	..	..	..	..	..	..	..	..	..
168	In Vehicular Traffic .. ..	..	..	2	2	1	..	..	..	..	..
169	On Railways .. ..	..	..	..	..	..	..	..	..	..	..
170	On Ships, Boats, &c. (not drowning)	..	..	..	..	..	..	..	..	..	..
171	In Building Operations .. ..	..	..	..	..	..	..	..	..	..	..
172	By Machinery .. ..	..	..	..	..	..	..	..	1	..	..
173	By Weapons and Implements .. ..	..	..	..	..	..	..	..	..	..	..
174	Burns and Scalds	2	1	4	7	3	2	1	1	..	..
175	Burnt in Fire of House .. ..	..	..	..	1	..	1	..	..	..	..
176	Poisons, Poisonous Vapours .. ..	..	..	1	..	..	1	..	..	..	..
177	Surgical Narcosis .. ..	..	..	..	..	..	..	..	..	..	..
178	Effects of Electric Shock .. ..	..	..	..	..	..	..	..	..	..	..
179	Corrosions by Chemicals .. ..	..	..	..	..	..	..	..	..	..	..
180	Drowning .. ..	..	..	3	..	1	..	..	..	..	1
181	Suffocation, Overlaid in Bed	13	8	..	..	..	..	..	..	..	..
182	" Otherwise	3	2	..	..	..	..	..	..	..	..
183	Fall in House .. ..	..	..	..	..	..	..	..	..	..	..
184	Fall in Street .. ..	..	..	..	..	..	..	..	..	..	..
185	Falls not specified .. ..	..	..	..	..	..	..	..	..	..	..
186	Weather Agencies .. ..	..	..	..	..	1	..	..	..	..	..
187	Starvation .. ..	..	..	..	..	..	..	..	..	..	..
188	Otherwise, not stated .. ..	..	..	..	..	..	..	..	..	..	..
189	Homicide .. ..	..	..	..	..	..	..	..	..	..	..
190	<i>Suicides:—</i> .. ..	..	..	..	..	..	..	..	..	..	..
191	By Poison .. ..	..	..	..	..	..	..	..	..	..	..
192	By Asphyxia .. ..	..	..	..	..	..	..	..	..	..	..
193	By Hanging and Strangulation .. ..	..	..	..	..	..	..	..	..	..	..
194	By Drowning .. ..	..	..	..	..	..	..	..	..	..	..
195	By Shooting .. ..	..	..	..	..	..	..	..	..	..	..
196	By Cut or Stab .. ..	..	..	..	..	..	..	..	..	..	..
197	By Precipitation from Elevated Places	..	..	..	..	..	..	..	..	..	..
198	By Crushing .. ..	..	..	..	..	..	..	..	..	..	..
199	By other and unspecified methods .. ..	..	..	..	..	..	..	..	..	..	..
200	Execution .. ..	..	..	..	..	..	..	..	..	..	..
201	Sudden Death, Cause not ascertained	..	..	..	..	..	..	..	..	..	..
202	Ill defined and unspecified causes .. ..	..	..	..	..	..	..	..	..	..	..
203	Uncertified	6	7	1	..	..	..	..	..	..	..
TOTALS, Pages 14 and 15		24	18	11	10	6	4	1	2	1	..
TOTALS, Pages 12 and 13		155	120	55	78	6	10	6	5	11	..
TOTALS, Pages 10 and 11		278	204	28	17	8	11	3	6	6	..
TOTALS, Pages 8 and 9		133	94	79	67	23	27	9	15	17	..
GRAND TOTALS.. ..		590	436	173	172	43	52	19	28	35	..

ths Registered from all causes—continued.

AGES.																ALL AGES.		TOTALS.
	25-		35-		45-		55-		65-		75-		85-			M	F	
F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		M	F	
..
..
..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1
..	1	..	1	..	1	..	1	..	..	..	..	..	..	..	5	..	..	5
..	..	..	1	..	1	2	3	..	1	..	..	1	..	..	9	5	..	14
..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2
..
..
..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	1	1	..	1	..	1	..	2	..	1	..	..	..	..	11	18	..	29
..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	3	..	3
..	..	..	2	1	..	1	1	..	..	..	..	..	..	..	4	3	..	7
..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..
..
..	1	..	1	..	1	..	1	..	1	..	..	..	..	..	10	..	..	10
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	13	8	..	21
..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	4	2	..	6
..	..	..	..	1	2	2	2	2	1	1	1	7	1	1	7	14	..	21
..	..	..	1	..	..	..	..	..	1	..	1	2	..	..	3	2	..	5
..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	3	..	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..
..	..	1	..	..	3	..	..	1	1	..	..	..	..	..	4	2	..	6
..
..	2	..	2	1	3	..	3	2	1	..	..	..	..	..	12	3	..	15
..	2	..	2	..	..	..	..	..	..	1	..	..	..	..	5	1	..	6
..
..	..	..	1	..	..	..	2	..	..	1	1	..	..	..	4	1	..	5
..
..
..
..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1
..
..	..	1	3	..	..	4	1	..	1	2	1	..	..	..	13	14	..	27
..	11	3	18	4	12	10	15	8	8	7	5	11	1	1	116	79	..	195
10	15	24	31	45	56	40	73	71	78	104	55	61	5	17	550	590	..	1140
5	11	24	47	45	94	103	99	127	137	163	101	142	21	35	837	887	..	1724
25	57	45	63	40	56	34	51	27	25	12	10	14	2	1	546	414	..	960
40	94	96	159	134	218	187	238	233	248	286	171	228	29	54	2049	1970	..	4019

Schedule B.—Nottingham. 1908. Deaths Registered from all causes

No.	Causes of Death.	All Ages.	Under 1	1—5	5—15	15—25	25—65	65 & up-wards.	In Public Institutions.
1	Small-pox .. .. .	..	..	..	..	..	..	..	..
2	Measles	31	9	20	1	..	1	..	..
3	Scarlet Fever	11	..	5	5	..	1	..	8
4	Typhus Fever .. .. .	..	..	..	..	..	..	..	..
5	Epidemic Influenza	46	..	1	..	1	19	25	12
6	Whooping-cough	64	28	35	1	..	..	..	2
7	Diphtheria, Membranous Croup	30	2	11	15	2	..	..	14
8	Croup	1	1	..	..	..	..	..	..
9	Enteric Fever	29	..	..	10	4	15	..	25
10	Asiatic Cholera .. .. .	..	..	..	..	..	..	..	..
11	Diarrhœa, Dysentery	135	112	12	1	..	1	9	7
12	Epidemic or Zymotic Enteritis	36	30	6	..	..	..	..	..
13	Enteritis	67	48	6	1	..	6	6	..
14	Epidemic Cerebro-Spinal Meningitis	1	..	1	..	..	..	..	..
15	<i>Other continued Fevers</i> .. .. .	..	..	..	..	..	..	..	..
16	Erysipelas	8	..	1	..	..	3	4	4
17	Puerperal Sepsis	9	..	..	..	1	8	..	..
18	<i>Other septic diseases</i> .. .. .	..	..	..	..	..	..	..	..
19	Intermittent Fever and Malarial Cachexia .. .. .	..	..	..	..	..	..	..	..
20	Tuberculosis of Meninges	52	15	27	7	1	2	..	4
21	Tuberculosis of Lungs	335	1	7	9	49	255	14	93
22	Other forms of Tuberculosis	62	12	15	15	6	13	1	9
23	Alcoholism	13	..	..	..	..	13	..	1
24	Cancer (Malignant new growths)	254	..	..	1	8	168	77	58
25	Premature Birth	186	186	..	..	..	..	..	4
26	Developmental Diseases	136	126	4	5	1	..	..	10
27	Old Age	154	..	..	..	..	..	154	51
28	Meningitis	31	11	7	8	1	4	..	2
29	Inflammation and Softening of Brain	15	..	..	..	..	5	10	3
30	Organic Diseases of Heart and Vessels	455	..	1	3	9	231	211	81
31	Acute Bronchitis	249	77	23	1	1	51	96	32
32	Chronic Bronchitis	153	..	..	..	..	43	110	54
33	Lobar (Croupous) Pneumonia	133	25	19	7	5	57	20	19
34	Lobular (Broncho-)Pneumonia	189	77	74	5	3	15	15	14
35	Diseases of Stomach	70	37	2	..	6	18	7	8
36	Obstruction of Intestines	40	7	1	4	5	15	8	16
37	Cirrhosis of Liver	25	..	..	..	..	22	3	2
38	Nephritis and Bright's Disease	96	..	1	3	3	63	26	25
39	Tumours and other Affections of Female Genital Organs	13	..	..	..	1	6	6	8
40	Accidents and Diseases of Parturition	12	..	..	..	3	9	..	2
41	Deaths by Accident or Negligence	135	29	20	13	3	46	24	49
42	Deaths by Suicide	32	..	..	..	2	25	5	4
43	Deaths from Ill-defined Causes	1	..	..	..	..	1	..	..
44	All other Causes	711	193	47	27	16	243	185	145
	ALL CAUSES	4019	1026	345	142	131	1359	1016	766

TABLE IV.

Nottingham, 1908. Deaths and Death-Rates from certain groups of Diseases.

A. All Ages.	Deaths.	Deaths per 1000 of the population.	Deaths per 1000 total Deaths.
1. Principal Epidemic Diseases ...	336	1·29	84
2. Pulmonary Diseases	759	2·91	189
3. Tuberculous Diseases	449	1·72	112
B. Infants under 1 year of Age.	Deaths.	Deaths per 1000 Births.	Deaths per 1000 Deaths under 1 year.
4. Wasting Diseases ...	327	46·5	319
5. Convulsive Diseases	73	10·4	71

NOTES.

1. Includes Small-pox, Measles, Scarlet Fever, Diphtheria, Whooping-Cough, Typhus, Enteric, and Simple Continued Fevers, and Diarrhoea.
2. Includes all Respiratory Diseases except Phthisis (Consumption).
3. Includes Tuberculous Phthisis, and other forms of Tuberculosis.
4. Includes Marasmus, Atrophy, Wasting, Debility, Inanition, Premature Birth, and Improper Feeding.
5. Includes Infantile Meningitis, Convulsions, and Dentition.

N.B.—This Table is now retained only to allow of comparison between present and past records.

TABLE V.

Nottingham. Deaths from the Principal Epidemic Diseases in the ten years 1898-1907, and in the Year 1908.

DISEASE.	Ten Years, 1898-1907.										1908.			
	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	Annual Average.	Proportion of Deaths to 1000 Deaths.	Deaths.	Proportion of Deaths to 1000 Deaths.
Small-pox .. ..	..	..	..	..	..	2	12	1	..	..	1.5	0.35	..	..
Measles	104	140	45	96	4	98	44	232	5	203	97.1	22.66	31	7.71
Scarlet Fever	33	53	55	11	23	34	29	19	17	5	27.9	6.51	11	2.74
Diphtheria	23	30	28	29	31	60	69	49	41	42	40.2	9.38	30	7.46
Whooping-Cough	59	55	103	96	57	90	91	61	40	131	76.3	17.81	64	15.92
FEVERS. { Typhus Enteric Simple Continued .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	54	114	75	79	50	36	57	24	40	37	56.6	13.21	29	7.22
	1	4	1	1	..	..	..	..	1	..	0.8	0.19	..	..
Diarrhoea	385	600	387	361	194	166	346	202	375	155	317.1	74.01	171	42.55
TOTAL	659	996	694	673	339	486	648	588	519	573	617.5	144.11	336	83.60
TOTAL, LONDON	12,565	11,228	10,136	10,203	10,393	8,166	9,990	7,990	9,047	6,720	9,644	121.6	6,599	98.0
TOTAL, ENGLAND & WALES	69,714	69,820	64,059	66,531	53,795	49,150	65,633	51,581	60,063	43,953	59,430	109.1	46,306	88.78

Birth-Rate, Death-Rate, Infantile Death-Rate, and Death-Rate from Epidemic Diseases and Phthisis.

(REGISTRAR-GENERAL.)

I. NOTTINGHAM.

In five yearly periods, 1856—1890, and in single subsequent years.

	Birth-Rate.	Death-Rate.	Infantile Death-Rate	DEATH-RATE FROM								
				7 Princip. Epidemic Diseases.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	"Fever."	Diarrhoea	Phthisis and other Tuberculous Diseases.
1856—1860	36.8	27.2	209	5.98	0.21	0.80	1.08	0.13	0.76	1.02	2.00	3.22
1861—1865	34.8	24.9	192	3.83	0.09	0.43	0.98	0.12	0.51	0.78	1.09	3.19
1866—1870	31.3	23.8	200	4.34	0.07	0.44	0.73	0.09	0.51	0.92	1.57	2.78
1871—1875	34.1	24.9	192	4.30	0.79	0.31	0.53	0.02	0.26	0.84	1.53	2.42
1876—1880	34.6	21.7	175	3.00	0.00	0.35	0.62	0.03	0.43	0.34	1.06	1.85
1881—1885	36.6	20.9	174	3.22	0.06	0.41	0.77	0.12	0.46	0.31	1.09	1.99
1886—1890	30.4	17.9	168	2.39	0.01	0.42	0.11	0.06	0.45	0.31	1.04	1.52
1891	29.8	19.5	169	2.49	0.00	0.51	0.13	0.09	0.56	0.32	0.84	1.69
1892	29.4	18.4	167	2.33	0.00	0.55	0.19	0.13	0.54	0.16	0.73	1.42
1893	30.2	18.4	172	2.62	0.02	0.11	0.37	0.07	0.27	0.31	1.47	1.81
1894	28.6	16.7	174	2.42	0.01	0.60	0.23	0.08	0.53	0.28	0.60	1.80
1895	29.7	18.5	189	2.64	..	0.00	0.23	0.04	0.14	0.24	1.97	2.10
1896	29.4	17.5	168	2.47	..	0.88	0.11	0.06	0.39	0.34	0.69	1.89
1897	28.9	18.4	202	2.81	..	0.21	0.15	0.09	0.49	0.21	1.66	1.88
1898	28.8	17.2	178	2.37	..	0.44	0.14	0.10	0.25	0.24	1.20	1.82
1899	28.9	20.0	210	3.33	..	0.58	0.23	0.13	0.23	0.48	1.68	1.67
1900	28.3	19.2	196	2.35	..	0.19	0.23	0.12	0.43	0.32	1.08	2.02
1901	28.4	18.5	193	2.86	..	0.41	0.05	0.12	0.42	0.35	1.51	1.80
1902	27.8	16.7	159	1.32	..	0.02	0.10	0.12	0.15	0.21	0.72	1.69
1903	28.3	16.5	165	2.05	0.01	0.39	0.14	0.26	0.39	0.14	0.68	1.68
1904	27.7	17.7	176	2.58	0.05	0.18	0.11	0.28	0.36	0.23	1.37	1.90
1905	26.5	16.5	155	2.27	0.00	0.92	0.07	0.19	0.24	0.09	0.76	1.63
1906	26.5	15.9	171	2.04	..	0.02	0.07	0.16	0.16	0.16	1.48	1.63
1907	26.7	17.5	168	2.23	..	0.79	0.02	0.16	0.51	0.15	0.61	1.77
1908	26.6	15.2	145	1.25	..	0.12	0.04	0.11	0.23	0.11	0.64	1.72

II. ENGLAND AND WALES.

In five yearly periods, 1858—1890, and in single subsequent years.

Phthisis only.

1858—1860	34.3	22.2	153	4.03	0.22	0.48	0.89	0.37	0.49	0.79	0.78	2.57
1861—1865	35.1	22.6	151	4.22	0.22	0.46	0.98	0.25	0.52	0.92	0.87	2.53
1866—1870	35.3	22.4	159	4.08	0.10	0.43	0.96	0.13	0.55	0.85	1.06	2.45
1871—1875	35.5	22.0	153	3.76	0.41	0.37	0.76	0.12	0.50	0.60	1.00	2.22
1876—1880	35.4	20.8	144	2.94	0.01	0.39	0.68	0.12	0.53	0.38	0.83	2.04
1881—1885	33.4	19.3	139	2.32	0.01	0.41	0.43	0.16	0.46	0.27	0.65	1.82
1886—1890	31.4	18.9	145	2.25	0.01	0.46	0.24	0.17	0.44	0.20	0.66	1.63
1891	31.4	20.2	149	2.70	0.00	0.43	0.17	0.17	0.46	0.16	0.46	1.60
1892	30.5	18.9	148	2.78	0.01	0.46	0.19	0.22	0.45	0.14	0.50	1.47
1893	30.8	19.2	159	3.16	0.05	0.37	0.23	0.31	0.34	0.23	0.95	1.47
1894	29.6	16.6	137	2.25	0.02	0.39	0.16	0.29	0.41	0.16	0.36	1.38
1895	30.3	18.7	161	2.14	0.00	0.38	0.15	0.26	0.32	0.18	0.87	1.40
1896	29.7	17.1	148	2.18	0.02	0.56	0.18	0.29	0.41	0.17	0.55	1.30
1897	29.7	17.4	156	2.15	0.00	0.40	0.14	0.24	0.35	0.16	0.86	1.34
1898	29.4	17.6	161	2.22	0.01	0.41	0.11	0.24	0.31	0.18	0.96	1.31
1899	29.3	18.3	163	2.21	0.01	0.31	0.12	0.29	0.30	0.20	0.98	1.33
1900	28.9	18.3	154	2.00	0.00	0.39	0.12	0.29	0.34	0.17	0.69	1.33
1901	28.5	16.9	151	2.05	0.01	0.27	0.13	0.27	0.30	0.16	0.91	1.26
1902	28.6	16.3	133	1.64	0.08	0.38	0.15	0.23	0.29	0.13	0.38	1.23
1903	28.4	15.4	132	1.46	0.02	0.27	0.12	0.18	0.27	0.10	0.50	1.20
1904	27.9	16.2	146	1.94	0.01	0.36	0.11	0.17	0.34	0.09	0.86	1.24
1905	27.2	15.2	128	1.52	0.00	0.32	0.11	0.16	0.25	0.09	0.59	1.14
1906	27.0	15.4	133	1.73	0.00	0.27	0.10	0.17	0.23	0.09	0.87	1.15
1907	26.3	15.0	118	1.26	0.00	0.36	0.09	0.16	0.29	0.07	0.29	1.14
1908	26.5	14.7	121	1.29	0.00	0.22	0.08	0.15	0.27	0.07	0.50	..

Principal Vital Statistics of the 76 Greater English Towns for 1908
(taken from the Registrar-General's Annual Summary).

Populations estimated to middle of 1908 (from increase during
Decennium, 1891-1901).

	Populations estimated to middle of 1908	Birth- Rate.	Recorded Death- Rate.	Cor- rected Death Rate.	DEATH-RATES AT AGE PERIODS.			Death- Rate from seven principal epidemic diseases.	Percent- age of uncerti- fied Deaths.
					Deaths under one year per 1000 Births.	Deaths 1 to 60 years per 1000 living at those ages.	Deaths over 60 years per 1000 living at those ages.		
England & Wales	35,348,780	26.5	14.69	14.69	121	7.2	67.9	1.29	1.42
76 Large Towns ..	16,234,952	26.9	14.91	15.84	129	7.7	71.3	1.59	0.9
London	4,795,757	25.2	13.82	14.53	113	7.1	68.0	1.35	0.1
Croydon	157,698	25.4	12.77	13.09	99	6.2	61.9	1.37	—
Willesden	154,792	26.1	10.51	11.28	99	5.2	64.7	1.00	0.4
Hornsey	92,713	16.1	8.31	9.47	62	4.1	56.9	0.57	0.3
Tottenham	126,146	30.2	12.54	13.53	96	6.6	70.2	1.23	0.1
West Ham	315,000	28.8	13.86	14.82	128	7.4	69.7	2.39	0.0
East Ham	142,976	24.8	10.34	11.03	110	5.5	65.4	1.27	—
Leyton	125,815	25.8	10.42	10.72	77	5.4	55.9	0.82	0.3
Walthamstow	131,486	26.2	10.53	11.13	107	5.3	65.6	0.98	—
Hastings	67,817	15.5	11.69	11.24	81	5.1	59.0	0.40	0.7
Brighton	129,967	21.3	14.72	14.51	104	6.9	71.1	0.64	0.1
Portsmouth	211,493	28.4	13.76	14.13	99	6.8	64.4	0.97	0.5
Bournemouth	70,801	17.1	12.85	13.58	83	6.8	61.1	0.71	0.8
Southampton	122,196	23.9	12.88	12.81	113	6.3	59.7	1.17	—
Reading	81,647	22.6	11.78	12.18	99	5.4	66.1	1.34	1.8
Northampton	96,405	20.9	11.55	12.01	96	5.8	62.1	0.71	1.9
Ipswich	73,852	24.5	14.29	13.96	107	6.8	69.0	0.89	—
Great Yarmouth	53,152	26.7	15.03	13.76	126	5.7	66.3	0.94	—
Norwich	122,841	25.2	14.09	13.44	116	5.7	70.9	1.12	0.7
Plymouth	122,113	22.2	14.99	14.62	129	7.2	65.7	0.91	—
Devonport	81,525	25.4	13.30	13.95	125	6.0	67.6	1.21	—
Bristol	372,785	23.1	13.56	13.93	126	6.4	66.8	1.16	0.2
Hanley	67,998	33.0	18.43	20.14	166	8.9	92.6	1.97	0.9
Burton-on-Trent	53,936	22.1	12.71	13.66	111	6.9	65.8	1.06	2.0
Wolverhampton	103,318	25.8	14.29	14.78	132	7.0	68.9	1.22	0.3
Walsall	97,778	29.6	14.93	15.81	148	7.4	68.1	2.07	0.6
Handsworth	68,051	23.0	10.73	11.81	87	4.6	74.1	0.84	1.5
West Bromwich	69,786	32.4	16.16	16.30	139	7.5	75.6	1.82	1.7
Birmingham	558,357	28.4	15.91	17.12	144	8.3	73.8	1.86	3.8
Kings Norton	78,608	24.7	10.41	10.88	85	5.0	60.1	0.88	3.6
Smethwick	68,416	31.0	13.37	14.63	134	6.2	77.6	1.53	1.1
Aston Manor	84,256	26.1	12.51	13.87	127	6.2	67.6	1.90	0.7
Coventry	78,889	32.8	15.39	15.43	95	8.0	70.0	1.10	1.9
Leicester	240,172	23.4	12.96	13.83	131	6.5	64.8	1.53	1.1
Grimsby	71,800	31.7	14.43	15.45	139	7.1	62.7	1.46	1.3

Principal Vital Statistics of the 76 Greater English Towns for 1908—*continued*.

		Populations estimated to middle of 1908.	Birth- Rate.	Recorded Death- Rate.	Cor- rected Death Rate	DEATH-RATES AT AGE PERIODS.			Death- Rate from seven principal epidemic diseases,	Percent- age of uncerti- fied Deaths.
						Deaths under one year per 1000 Births.	Deaths 1 to 60 years per 1000 living at those ages.	Deaths over 60 years per 1000 living at those ages.		
Nottingham	..	260,449	26·6	15·22	16·03	145	7·2	68·8	1·25	0·7
Derby	..	127,583	25·9	13·06	14·08	112	6·2	73·7	0·95	—
Stockport	..	102,339	27·7	18·22	19·68	168	9·4	77·2	2·45	0·2
Birkenhead	..	119,830	31·4	15·76	16·80	136	8·0	69·2	1·88	0·8
Wallasey	..	68,849	25·2	13·56	14·83	102	7·0	79·0	1·51	1·2
Liverpool	..	753,203	31·7	19·18	20·53	141	11·0	80·4	2·19	2·7
Bootle	..	68,248	31·3	18·24	20·09	147	10·1	85·8	2·50	3·5
St. Helens	..	93,812	34·7	15·71	17·02	122	8·6	81·3	1·52	3·3
Wigan	..	89,636	32·8	17·99	19·74	156	9·7	84·5	1·88	0·1
Warrington	..	71,268	32·7	17·05	18·37	134	9·8	76·2	2·41	4·4
Bolton	..	185,358	24·5	15·45	17·47	148	8·0	85·1	1·70	0·4
Bury	..	59,064	23·0	15·81	17·70	129	8·4	78·6	1·22	1·3
Manchester	..	649,251	29·1	18·23	20·32	151	10·3	80·3	2·25	0·7
Salford	..	239,294	29·6	17·82	19·69	152	10·1	77·4	3·04	0·5
Oldham	..	142,507	28·0	19·83	22·30	159	11·3	84·6	2·50	0·1
Rochdale	..	88,821	24·6	18·39	20·34	168	9·1	92·5	2·18	2·3
Burnley	..	105,100	28·2	17·89	20·17	200	8·8	78·6	2·80	1·7
Blackburn	..	135,961	25·0	15·70	17·75	149	8·0	79·9	1·56	1·8
Preston	..	117,799	27·7	17·97	19·66	153	9·4	85·2	2·24	3·3
Barrow-in-Furness	..	62,312	30·0	13·07	14·85	111	7·1	68·8	1·09	3·3
Huddersfield	..	94,776	24·4	17·09	18·33	111	9·6	79·3	1·61	1·0
Halifax	..	111,018	19·0	14·11	15·29	101	7·4	76·4	1·01	1·4
Bradford	..	292,136	20·2	15·54	17·18	143	8·0	80·6	1·36	0·2
Leeds	..	477,107	24·8	15·28	16·67	137	8·1	77·7	1·49	0·1
Sheffield	..	463,222	30·7	15·84	17·07	140	7·9	78·7	1·85	2·5
Rotherham	..	63,736	32·8	16·02	16·57	148	8·3	69·0	2·88	1·6
York	..	85,861	25·1	12·63	13·01	104	6·1	63·3	1·14	0·1
Hull	..	271,137	30·2	16·17	16·57	145	8·0	71·6	2·19	0·8
Middlesbrough	..	103,511	35·9	19·77	21·53	158	11·6	71·4	3·47	1·0
Stockton-on-Tees	..	53,160	31·6	17·95	18·82	152	9·7	73·6	2·70	1·4
West Hartlepool	..	77,573	26·4	11·97	13·14	113	6·3	71·5	0·72	0·5
Sunderland	..	157,693	33·0	17·72	18·28	146	9·1	77·2	1·86	2·3
South Shields	..	115,535	30·1	15·47	16·37	134	8·5	72·3	1·69	4·6
Gateshead	..	128,393	30·9	14·93	15·74	148	7·7	63·8	1·90	5·4
Newcastle-on-Tyne	..	277,257	29·7	15·99	17·22	136	8·6	75·4	1·26	0·3
Tynemouth	..	55,244	34·3	17·51	18·08	137	9·1	69·5	1·61	2·5
Newport (Mon.)	..	76,955	32·6	16·15	17·45	134	8·6	74·3	1·28	0·6
Cardiff	..	191,446	26·6	12·96	14·09	125	6·7	69·3	1·10	0·1
Rhondda	..	133,137	40·3	18·38	20·22	184	8·9	73·4	3·49	0·7
Merthyr Tydfil	..	77,219	35·6	19·14	20·29	178	9·8	71·6	2·49	1·1
Swansea	..	97,810	33·1	18·55	19·90	151	9·6	77·4	1·58	0·2

The City of Nottingham.

SITE and POPULATION DATA, and RATABLE VALUE, 1908.

Situation and Soil.—Nottingham lies in lat. 52 deg. 57 min. north, and long. 1 deg. 9 min. west, in the S.W. portion of the County of Notts., and in the watershed of the Trent. It stretches about $7\frac{1}{2}$ miles north from the Trent, and has an average breadth of about three and a half miles. It stands for the most part on Bunter sandstone; but on the east the Keuper marls appear; on the north and west, red marl and magnesian limestone of the Permian series; and on the south towards the Trent, and in the valley of the Leen and other small streams, are found the alluvium and gravels of the Trent and its local tributaries.

Area and Altitude.—The City has an area of 10,935 acres, and its altitude varies from about 80 feet (at Trent Bridge) to 425 feet (on Woodborough Road) above ordnance datum (mean water level at Liverpool).

Population.—At census of 1881, 186,575; at census of 1891, 213,877; at census of 1901, 239,753.

Average number of persons to each house:—At census of 1881, 4·8; at census of 1891, 4·6; at census of 1901, 4·5.

Average number of persons to an acre, 23·82.

Ratable Value, £1,215,750 (for Poor-Law purposes).

GENERAL VITAL STATISTICS.

Population.—The only population figures which are entirely reliable are those of each decennial census. In the interval between the census years one has only estimated figures to depend upon. The usual method of estimating population adopted in this country is that of the Registrar-General, which is based upon the assumption that the rate of increase or decrease which obtained during the preceding intercensal period has been uniformly continuous since its close. This method is probably the best available, and its general adoption secures uniformity of treatment for one of the most important data connected with the comparable vital statistics of various communities throughout the country.

The population of Nottingham at the middle of 1908, thus estimated, was 260,449.

So far as one can judge by the result of other methods of calculating population, this number seems to be approximately correct. The number of inhabited houses was greater in 1908 than in 1907 by more than 900. Indeed, had the average number of persons to a house been the same in 1908 as at the last census, the population figure should be even larger than it is, but as this average has been less at each successive census since the extension of the borough (1877), such an inference would probably be erroneous.

Other minor criteria for estimating population are the numbers of marriages, births, and deaths. The marriages and deaths cannot on this particular occasion be depended on; the first because of trade depression, and the second on account of the exceptional healthiness of the year. The births, however, though for the most part diminishing, are less liable to sudden variation, and these show an increase as compared with those of the previous year, compatible with such an advance in the population as that given above.

Another suggestive item in connection with estimates of population, and of the state of local trade, is the number of new houses built in successive years. During the twelve months ended November, 1908, there were 1,009 new houses certified in Nottingham by the City Engineer. The numbers of such houses in the five immediately preceding years were :—1907, 1,216 ; 1906, 1,119 ; 1905, 993 ; 1904, 1,220 ; and 1903, 1,630.

The ratio of the sexes in the population of the City at the census of 1901 was that of 100 males to 114·6 females. If the estimated population for 1908 be divided according to this sexual ratio, it will show 121,365 males, and 139,084 females. The numerical excess of the female element of the local population over the male has declined in recent years. At the census of 1891 there were 119 females to every 100 males, as compared with 114·6 to 100 ten years later. This diminution is due to a reduced demand for female labour in the staple industries of the City. The numerical excess of females over males in the local population, however, is still considerably greater than that of the country as a whole, the proportion of females to males in the general population being as 107 to 100.

Nottingham still occupies the twelfth place from the highest among the great towns of England and Wales, arranged according to the magnitude of their estimated populations. The two towns next above it are Hull and Newcastle-on-Tyne, with populations of 271,137 and 277,257 respectively ; and those next below Leicester and Salford, with populations respectively of 240,172 and 239,294.

There are now, therefore, no less than twelve towns in this country each with an estimated population of more than a quarter of a million, and Nottingham stands last on the list of these monster communities with a total of 260,449.

Marriages.—The marriages which took place in Nottingham during 1908 numbered 2,195, as compared with 2,403, 2,387, and 2,077 in the three immediately preceding years respectively, and an annual average of 2,247 for the eight years 1900–1907. The complete annual totals for years prior to 1900 cannot be given, as the unification of the City area for all purposes of local government was not effected till 1899, and was not carried out sufficiently early in the latter year to allow of the inclusion here of the exact figures for that year. The sudden drop in the number of marriages during 1908, as compared with those of 1907 and 1906, speaks eloquently of the inhibiting influence exerted by trade depression upon the most important institution of our social system.

The 2,195 marriages recorded during 1908 correspond to a rate of 16·86 persons married per 1,000 living at all ages. This rate, though 1·80 per 1,000 below the Nottingham rates for the two immediately preceding years, is 1·96 and 1·0 respectively above the rates of England and Wales for 1908 and 1907, and almost exactly 1·0 per 1,000 above that of London for 1908. The London rate for 1908, we learn from the Registrar-General, was the lowest recorded in London since complete marriage statistics have been available.

The accompanying table gives the numbers of marriages celebrated in churches, in chapels, and in registrars' offices respectively, during each quarter of 1908:—

Nottingham.

Marriages in Year 1908.

	Qr. I.	Qr. II.	Qr. III.	Qr. IV.	TOTAL.
Churches	185	351	342	371	1249
Chapels	18	32	29	21	100
Registrars	190	197	220	239	846
	393	580	591	631	2195

The church marriages have decreased by 15 per cent., and the chapel marriages by 17 per cent., while the registrars' marriages have increased by $2\frac{1}{2}$ per cent. As explained in previous reports, I have not at my disposal sufficient reliable data to enable me to express the marriage rate as a proportion of the marriageable persons living, in accordance with the recommendation of the Registrar-General. The method of giving it as a proportion per 1,000 of the existing population, though subject to statistical fallacy, has the advantage of rendering the rate comparable with past rates for this City and district and other places.

Births.—The births registered in Nottingham during 1908 numbered 7,037. My returns on this occasion furnish a figure identical with that of the Registrar-General. This is the largest annual total of births recorded since 1887, in which year it reached 7,395. Part of the increase of 1908, however, is due to the inclusion of a fifty-third week in the statistical year. If due correction be made for this extension, the birth-rate falls from a crude 27·02 to a corrected 26·6 per 1,000 living. This last rate is practically 0·1 below that for 1907, and 0·1 above that for 1905, which is the lowest on record.

The corresponding rates for 1908, in the 76 great towns taken together, in London, and in England and Wales, were respectively 26·9, 25·2, and 26·5 per 1,000.

There is a slight recovery in the rate of England and Wales for 1908, as compared with that of 1907, but the rates of the 76 great towns taken together, and of London, show a continuance of the steady decline which has been their characteristic feature in recent years.

The 7,037 children born were 3,542 of them males, and 3,495 females. Of the males 234, and of the females 218, were born out of wedlock. The illegitimate births were equal to 6·4 per cent. of all. The illegitimate

births in the three immediately preceding years were in the proportion of 6·0 per cent., 5·7 per cent., and 6·4 per cent. of all births, respectively.

The illegitimate births of London in 1908 were equal to 3·5 per cent. of all births, and to 5·9 per 1,000 of the unmarried and widowed females aged 15–45 years. The illegitimate births of England and Wales in 1908 were equal to 3·9 per cent. of all births. The illegitimate birth-rate of the country as a whole, if measured in five yearly periods, fell continuously from 6·7 per cent. in 1845–50 to 3·9 per cent. in 1901–05.

As stated by the Registrar-General in his report for 1907, the birth-rate expressed as a proportion of registered births to the total population is at best only an approximate gauge of the fertility of a community, because it takes no account of the changing constitution of the population in respect of age, sex, and condition as to marriage. Nor is it quite reliable for purposes of comparison where two or more communities are concerned, on account of the differences of age and sex constitution of the respective populations. In order to make an entirely satisfactory comparison in this regard, it is necessary not only to consider the birth-rates in relation to the total population, but also in relation to the number of possible mothers. But while giving due weight to such facts as these, it is still possible to learn much from a comparison of the crude birth-rates in a general survey of the subject, and it is well that such is the case, because the above mentioned correction in many instances cannot be made.

Bearing in mind these facts, we may profitably consider the past and present birth-rates of Nottingham, and some other places. In 1883, the birth-rate of Nottingham per 1,000 living was 37·8, and the average rate for the five years 1881 to 1885 was 36·5. The lowest rate yet recorded was 26·5, in 1905, and the rate has oscillated between 26·5 and 27·7 since the latter

year. During the 20 years, therefore, between 1885 and 1905, the Nottingham birth-rate had fallen 30 per cent. The rates of the great towns for this period cannot be given, owing to the additions made to the list during recent years, but the London birth-rate is obtainable, and this fell between 1867 and 1908 from 36·5 to 25·2 per 1,000. The birth-rate of England and Wales as a whole can also be furnished. Between 1876 and 1907 this rate declined from 36·3 to 26·3 per 1,000.

The birth-rates of almost all the civilized city- and other communities of the world have been steadily falling in recent years; but there are certain notable exceptions, such as those of Ireland, Spain, and parts of Austria and Russia. The probable explanation of the exception in these cases, is the local maintenance of—what are now frequently considered—the old-fashioned religious beliefs respecting matrimony and parenthood.

The birth-rate of Dublin in 1907 was 6·8 per 1,000 higher than in 1881; whereas in the great cities of England, there was between these years a notable decline in the birth-rate all round. The amount of the decline ranged from 15·5 per cent. in Liverpool, 18·7 per cent. in Sheffield, 23 per cent. in Manchester, and 24 per cent. in Birmingham, to 26 per cent. in London, 29 per cent. in Nottingham, 30 per cent. in Bristol, 32 per cent. in Leeds, 39 per cent. in Bradford, and 40 per cent. in Leicester. The percentage decline of the birth-rate of England and Wales during the past 20 years has been 17·7 per cent. This amount (for any individual European country as a whole) is only exceeded by that of France and Belgium (bracketed equal at 20 per cent.) Scotland follows next to England with 12·7 per cent., then Denmark with 9·8 per cent., the German Empire with 8·4 per cent., Sweden with 8·2 per cent., Prussia with 7·1 per cent., Switzerland with 6 per cent., and Italy with 2·5 per cent. The worst feature of this

decline is that it is taking effect most strongly upon the so-called middle and upper working classes — those classes which constitute the backbone of the Aryan race.

Deaths.—The deaths of Nottingham people which occurred in Nottingham during 1908 numbered 4,019 according to my returns, and 4,030 according to those of the Registrar-General. This discrepancy, however, produces a difference of only 0·04 per 1,000 in the death-rate. I shall adopt here, therefore, as a rate, the figure to one place of decimals most nearly corresponding to the Registrar-General's total, viz., 15·2 per 1,000. This is known as the crude rate, being the actual number of deaths per 1,000 of population estimated to be living at the mid year. This rate is 2·2 per 1,000, alike, below the rate for 1907, and the average rate for the ten years 1898–1907, and is the lowest annual death-rate for Nottingham on record. The corrected death-rate given by the Registrar-General for each of the great towns, is the crude death-rate corrected for departures in its age and sex distribution, from the standard of each existent in the population of England and Wales during the 1891–1900 decennium.

The corrected death-rate of Nottingham for 1908 obtained in this manner is 16·03 per 1,000—another exceedingly low rate for Nottingham. If the death-rate of England and Wales, at all ages, be expressed as a standard 1,000, the corrected death-rate of Nottingham in numerical relation thereto would be represented by 1091.

Nottingham occupied at the close of 1908 the 40th place from the lowest on the list of the great towns arranged according to their crude recorded death-rates, and the 41st place on the same list arranged according to corrected rates. It has thus improved its position by 21 places on the 1st list, and by 16 places on the 2nd, as compared with its record for 1907. In other

words, Nottingham has improved in health, under the influence of a healthy year, to a greater extent than many other English towns.

There were 8 of the great towns during 1908 with corrected death-rates below 12 per 1,000, viz., Hornsey, Leyton, King's Norton, East Ham, Walthamstow, Hastings, Willesden, and Handsworth. There were 10 of them also with corrected death-rates above 20 per 1000. These were Bootle, Hanley, Burnley, Rhondda, Merthyr Tydfil, Manchester, Rochdale, Liverpool, Middlesbrough, and Oldham.

According to my returns for 1908, the total of 4,019 deaths of Nottingham people was made up of 2,049 male, and 1,970 female deaths. The male deaths correspond to a rate of 16·8 per 1,000 living males, and the female to one of 14·1 per 1,000 living females. The difference to the advantage of females is here therefore equal to 2·7 per 1,000, as compared with one of 1·9 in England and Wales as a whole during the same period.

In Table III., pp. 8 to 16, the deaths of males and females respectively, from various causes at several age-periods are given in detail. I shall not make a general analysis of this table here, but may mention a few death-causes which commonly exact toll of either sex to a different degree. Measles and epidemic diarrhœa are more fatal to infant males than infant females, and as the majority of deaths from both occur in infancy, the male death-roll for all ages is commonly heavier than the female. This was the case in 1908. Tuberculosis, again, and especially phthisis, is more fatal to males than females, and in Nottingham the higher fatality among males is more pronounced than usual elsewhere. For example, the deaths of males from phthisis in this City during 1908 numbered 203, and those of females only 132, *i.e.*, 35 per cent. less than the males. Of examples on the other side, that of cancer is probably

the most notable. The deaths of males from this cause during 1908 numbered only 72, while those of females were more than double, at 150.

The death-rate of infants, expressed as the number of deaths under 12 months of age per 1,000 births during the year, was equal to 145. This is the lowest infant death-rate for the City on record. Epidemic diarrhœa, measles, and whooping-cough are commonly large contributors to this infant death-rate. During 1908, the deaths from all of them were relatively few in number, and hence in great measure the lowness of the rate. The deaths under one year from epidemic diarrhœa numbered 142, against an annual average for the past 10 years of just 300, and the infant deaths from measles and whooping-cough were 37 in number, as compared with a 10 years' annual average of nearly twice this amount.

The death-rate of infants (per 1,000 births) in the 76 great towns during 1908 was equal to 129, in the 142 lesser towns to 124, in London to 113, in England and Wales as a whole to 121, and in England and Wales less the 218 towns, to 110. All these latter rates are higher than the corresponding rates for 1907, excepting only that of London, which is the lowest on record for that City.

The deaths of persons aged between 1 and 60 years per 1,000 of such persons living during 1908, were at the rate of 7·2 in Nottingham, 7·7 in the great towns, 7·1 in London, and 7·2 in England and Wales. All these rates are less than the corresponding rates of 1907, that for Nottingham by 1·3 per 1,000.

The death-rate per 1,000 persons living over 60 years of age, during 1908, was 68·8 in Nottingham, 71·3 in the great towns, 68 in London, and 67·9 in England and Wales. Each of these rates again is lower than its fellow of 1907, and the Nottingham rate by 8·1 per 1,000.

Registration Sub-Districts.—I have once more estimated the populations of these sub-districts on the assumption that they have increased *pari passu* with the entire population of the City. I have already explained in previous reports that this was practically the only course left open to me, on account of the many changes made in the areas of these districts in recent years. Though subject to obvious fallacies, this method does not appear to lead us very greatly astray, judging by the general consistency of the rates based on the population figures it yields.

The birth-rate of Bulwell, at 35·6 per 1,000, still heads the list of local birth-rates. The Bulwell rate in 1907 was 35·1. N.W. has a birth-rate of 23·6, against 24·4 in 1907; N.E. one of 24·4, against 23·8 in 1907; S.W. one of 25·0, against 25·1 in 1907; and S.E. one of 29·8, against 28·0 in 1907.

The rates in N.W., N.E., and S.W. vary but little, and their dimensions are in keeping with the well-known tendency of the times; but the steady increase in the Bulwell rate probably indicates, in some measure, an under-estimated population, notwithstanding that the major part of the Bulwell population belongs to the class in which the birth-rate is for the most part still maintained at a fairly high level.

I have cited in previous reports the birth-rates of such places as Sunderland, Swansea, Merthyr Tydfil, Middlesbrough, and Rhondda, as examples of this high maintenance of the birth-rates. During 1907, the rates of these working-class centres ranged from 33·0 to 40·3 per 1000.

The illegitimate birth-rates, expressed as percentages of total births, were as follows in the several sub-districts:—Bulwell, 8·1 per cent.; N.W., 4·4 per cent.; N.E., 6·4 per cent.; S.W., 4·9 per cent.; and

S.E., 8·4 per cent. These figures, excepting only those for S.E., are somewhat higher than in 1907, but the relative positions of the several districts with regard to the proportioned number of illegitimate births in each, are unaltered from last year.

Births in Registration Sub-Districts. 1908.

Sub-District.	Legitimate.		Illegitimate.		Total of each Sex.		Total of both Sexes.
	M.	F.	M.	F.	M.	F.	
Bulwell ..	760	728	66	66	826	794	1620
N.W.... ..	713	718	38	28	751	746	1497
N.E.	829	817	59	51	888	868	1756
S.W.	520	500	25	27	545	527	1072
S.E.	486	514	46	46	532	560	1092
TOTALS ..	3308	3277	234	218	3542	3495	7037

The crude general death-rates of the sub-districts per 1,000 living, were also in the same order as in 1907, but at a much lower level. These rates were as follows:—Bulwell, 16·3, against 17·7 in 1907; N.W., 14·6, against 16·7; N.E., 15·5, against 17·0; S.W., 13·9, against 16·8; and S.E., 17·4, against 20·8; the greatest improvement as compared with 1907 being seen in N.W., S.W., and S.E., where the reductions ranged from 2·1 to 3·4 per 1,000.

The infant death-rates per 1,000 births were 123 in Bulwell, 152 in N.W., 157 in N.E., 129 in S.W., and 170 in S.E. There was a marked decline in all the infant death-rates, as compared with those of 1907, but the largest decline was that of S.W. (23 per cent.). The Bulwell rate was again the lowest, notwithstanding

the high birth-rate of that district; and I have once more to observe that the high illegitimate birth-rate of Bulwell, does not carry with it the same high mortality of illegitimate children which occurs generally elsewhere in the city.

The death-rates per 1,000 living from the 7 principal epidemic diseases were as follows in the several sub-districts:—Bulwell, 1·18; N.W., 1·10; N.E., 1·49; S.W., 1·09; and S.E., 1·58. All these rates are low, but those of Bulwell, N.W., and S.W. are remarkably so.

Measles caused but little trouble. It was almost exclusively confined to the northern half of the City, and caused only 31 deaths during the year. Fifteen of these deaths, however, occurred during the last month of 1908, and marked the commencement of the still existent outbreak of the current year.

Scarlet Fever had, during 1908, a less even distribution than usual of late years. The attack-rate of the sub-districts ranged from 1·5 per 1,000 in S.W., to 3·7 in Bulwell. Five of the 11 fatal cases had origin in Bulwell, 2 in N.W., 3 in N.E., 1 in S.W., but none in S.E. The autumnal rise was exceptionally well marked, 344 cases, out of a total of 595 for the whole year, occurring during the last 4 months.

Diphtheria, unlike scarlet fever, had a local and seasonal incidence remarkably uniform during 1908. The attack-rate ranged from just over 1 per 1,000 in S.E., to just over 2 per 1,000 in N.W. The numbers of fatal cases also from the several sub-districts varied only from 5 each in Bulwell, S.W., and S.E., to 7 and 8 respectively, in N.E. and N.W. With regard to seasonal incidence, the maximum monthly number was 55, in the four weeks ended Feb. 22nd, and the minimum, 21, in the like period ended May 16th.

*The spot map at page 48A, shews at a glance the distribution of the disease in the City during the year.

In referring to fatal cases of notifiable infectious diseases, it will be noticed that "place of origin" is mentioned. This is done because many of these are removed to the City Isolation Hospital.

Whooping-cough occurred in all the sub-districts during the first half of the year, with remarkably even monthly distribution, 44 out of 64 total deaths occurring in this period, with 6 and 9, respectively, for minimum and maximum monthly totals. In the latter half of the year it diminished rapidly, and had a less even distribution.

Two hundred and thirty-seven cases of enteric fever were notified in Nottingham during 1908, and these were scattered very generally over the poor neighbourhoods of the 5 sub-districts in the following numbers:—Bulwell, 34; N.W., 50; N.E., 67; S.W., 46; and S.E., 40. The attack-rate per 1,000 of population was slightly above 1 in the two southern divisions, but only from 0·8 to 0·9 elsewhere. Fatal cases were drawn from each of the five divisions—3 each from N.W., and S.E., 7 each from Bulwell and S.W., and 9 from N.E.

*The spot map on p. 56A, shows the exact distribution of the enteric fever cases in Nottingham during 1908.

Diarrhœa caused only 171 deaths in the City during 1908. The attack-rate per 1,000 ranged from 0·37 in Bulwell to 0·9 in S.E. The actual numbers of deaths in each of the sub-divisions of the City were almost exactly identical with those of 1907, except in N.E., and here the total for 1908 was 62, against 47 in 1907.

* The areas of the Registration Sub-Districts are shown on the spot maps, pp. 48A and 56A.

NOTTINGHAM SUB-DISTRICTS:

Summary of Statistics for 1908.

The Deaths and the Notifications are distributed over the Districts to which they properly belong.

	Population.				Deaths.		Death Rates.				DEATHS FROM								Notified Cases of											
	Census.		Approximate Enumeration.		Births.	Birth Rate.	Total.	Under 1 year.	From 7 prin. Epidemic Diseases.	Total per 1000 of population.	Under 1 year per 1000 Births.	From 7 prin. Epidemic Diseases per 1000 of pop.	From Phthisis per 1000 of pop.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	"Fever."	Diarrhea.	Influenza.	Cancer.	Phthisis.	Small-Pox.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Erysipelas.	Puerperal Fever.	
			1891.	1901.																										
	1881.	1891.	1901.	Estimated middle 1908.																										
Bulwell..	26,712	34,262	41,888	45,505	1620	35·6	741	199	54	16·3	123	1·18	1·41	..	7	5	5	5	13	7	17	7	41	64	..	170	77	34	70	4
N.W. ..	39,574	53,699	58,388	63,426	1497	23·6	926	227	70	14·6	152	1·10	0·99	..	14	2	8	10	3	33	15	69	63	..	155	131	50	31	3	
N.E. ..	53,911	63,870	66,274	71,995	1756	24·4	1117	275	107	15·5	157	1·49	1·44	..	9	3	7	17	9	62	10	73	104	..	118	134	67	51	2	
S.W. ..	26,080	32,072	39,510	42,920	1072	25·0	598	139	47	13·9	129	1·09	0·84	..	1	1	5	8	7	25	10	35	36	..	64	72	46	34	5	
S.E. ..	40,295	29,974	33,692	36,602	1092	29·8	637	186	58	17·4	170	1·58	1·86	..	..	..	5	16	3	34	4	36	68	..	88	40	40	25	2
The whole City }	186,572	213,877	239,752	260,448	7037	27·0	4019	1026	336	15·4	146	1·29	1·29	..	31	11	30	64	29	171	46	254	335	..	595	454	237	211	16	

N.B.—Populations at Censuses of 1881, 1891, and 1901, and Estimated for 1908.
Births and Deaths from Local Registrars returns, without correction.
Notified cases from Health Department Registers, without correction.

The deaths ascribed to phthisis in Nottingham during 1908 were 335 in number, as compared with 331 in 1907. The death-rates per 1,000 living in each of the sub-districts were as follows:—Bulwell, 1·4; N.W., 0·99; N.E., 1·4; S.W., 0·8; S.E., 1·9. These rates are higher in Bulwell, N.E., and S.E., and lower in N.W. and S.W., than in 1907.

The deaths attributed to cancer, and other malignant new growths, were 254 in number during 1908, as against 220 in 1907. The actual numbers of deaths were, 41 in Bulwell, 69 in N.W., 73 in N.E., 35 in S.W., and 36 in S.E. All these numbers, excepting the last, show an increase as compared with those of 1907, and the last shows a decrease of 2 as compared with the figure for that year. Expressed as death-rates per 1,000 living, these numbers would be well under 1 in S.W., just under 1 in Bulwell and S.E. and just over 1 in N.W. and N.E.

GENERAL REPORT.

PRINCIPAL EPIDEMIC DISEASES.

The maladies here dealt with are the seven principal epidemic diseases of the Registrar-General's Returns, and of health reports generally throughout the country. The deaths from all these diseases in Nottingham during 1908, as furnished by my returns, numbered 336, and by those of the Registrar-General 332. This difference of 4 in relation to the aggregates, however, is so small as to be negligible. It is made up of two deaths attributed to whooping-cough, and two to diarrhœa. The difficulty of determining from the certificates the primary death-cause is frequently considerable, and even with the most definite rules of procedure for dealing with certificates containing multiple causes—such, for example, as those in use for cases where diarrhœa is concerned—it is no easy matter to arrive at a satisfactory decision on this head.

Death-Rates from the Principal Epidemic Diseases.
(Average) for previous Ten Years, and for 1908.

	Nottingham.		London.		76 Towns.
	10 years. 1898-1907.	1908.	10 years. 1898-1907.	1908.	1908.
Small-pox	0·01	..	0·03	..	0·00
Measles	0·40	0·12	0·46	0·31	0·31
Scarlet Fever ..	0·12	0·04	0·11	0·11	0·10
Diphtheria	0·17	0·11	0·25	0·15	0·16
Whooping-Cough ..	0·32	0·23	0·37	0·20	0·29
Enteric Fever ..	0·24	0·11	0·10	0·05	0·08
Diarrhœa	1·13	0·64	0·77	0·53	0·65
Total Epidemic Rate	2·39	1·25	2·09	1·35	1·59

Nottingham, 1908. Temperature, Rainfall, and Seasonal incidence of Epidemic Diseases.

TWELVE FOUR-WEEKLY, AND ONE FIVE-WEEKLY, PERIODS ENDING ON														
	Jan. 25	Feb. 22	Mar. 21	April 18	May 16	June 13	July 11	Aug. 8	Sept. 5	Oct. 3	Oct. 31	Nov. 28	Jan. 2*	TOTAL.
Mean Temperature	34.6	41.6	38.5	43.2	48.1	57.5	58.5	60.8	55.8	57.4	52.6	45.4	39.8	48.7
Rainfall in Inches	0.91	1.18	1.61	2.18	3.49	1.28	1.96	1.72	3.53	1.06	0.82	1.30	1.43	22.703
Onsets of														
Cases of														
Small-Pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever	..	20	33	28	26	26	35	29	43	80	82	87	95	610
Diphtheria	..	55	46	48	21	23	22	22	29	43	31	47	45	470
Enteric Fever	..	13	16	8	10	22	14	21	20	24	31	20	16	229
Recorded Deaths from														
Measles	..	2	2	..	3	3	1	1	..	..	..	3	15	31
Whooping-Cough	..	9	6	7	7	6	9	1	2	3	..	4	4	64
Diarrhoea	..	..	2	1	1	6	11	16	53	28	28	18	6	174

The figures in this table are compiled from the weekly returns, and are therefore subject to some correction; also, as the dates of onset are taken instead of dates of notification in the case of the notifiable diseases, it will be found that the numbers here do not coincide with those of other tables dealing with the same subject, but giving dates of notification instead of dates of onset.

* Period of five weeks.

I may once more point out that there are numerous other diseases as purely infective in character as those contained in this list, such, for example as influenzas, pneumonias, septicæmias, tuberculosis, acute rheumatism, and venereal complaints. The one characteristic of the seven disorders in this group which differentiates them from others and calls for their association in a separate class by themselves, is their special epidemic or endemic quality, with or without intermissions or remissions.

Small-Pox (and Vaccination).—There was no case of small-pox reported in Nottingham, and only 12 deaths from this disease were registered in England and Wales during the year. The decline of infant vaccination in this district still continues, and there will probably be no recovery until small-pox once more invades us in force. The proportion of children born who were successfully vaccinated during the first half of the current year was 58.9 per cent. During 1902 and 1903, when small-pox last began to be prevalent in Nottingham, the corresponding percentage was just 71, or 12 per cent. more than at present.

It is useless, or even worse, to plead publicly in favour of vaccination, because such advocacy simply provokes more vigorous opposition on the part of its already too active opponents. I would only urge persons not yet convinced in its favour, but having an open mind on the subject, to make a careful study of the history of vaccination and small-pox in Germany since 1874, when the German Vaccination Law was passed. If such study does not convince them that vaccination and re-vaccination, properly performed, are a power for good and not for harm, they must indeed be hard to teach. Under the German law, children must be vaccinated before they are 12 months old, and re-vaccinated in their 12th year. This law is strictly

enforced, with the result that small-pox has completely lost its sting in Germany, and what few cases do occur are dealt with harmlessly and inexpensively in pavilions of the general hospitals throughout the country.

**Vaccination in Nottingham Union. Summary of Statistics,
1883—1908.**

Average of 5 yrs.	Births. *	PERCENTAGE.			Certified as Insus- ceptible of Vaccina- tion.	Had Small- Pox.	Certificates granted to "Conscien- tious Ob- jectors."
		Success- fully Vac- cinated.	Died Un- vaccinated.	Not finally accounted for.			
1883-88 ...	6194	74·3	12·4	13·0	10	...	...
1889 ...	5398	67·3	12·0	12·1	12	...	...
1890 ...	5084	69·8	11·7	14·0	11	...	...
1891 ...	5033	67·1	12·0	16·0	8	...	...
1892 ...	5142	63·8	12·0	16·2	15	...	...
1893 ...	5193	64·4	13·4	17·7	24	...	...
1894 1st half-year	2632	62·5	12·7	11·2	9	...	...
1895 do.	2758	43·1	14·2	15·3	11	...	...
1896 do.	2728	29·4	11·7	16·4	3	...	...
†1896-97 ...	5313	18·97	15·60	52·88	3	...	...
†1897-98 ...	5391	23·05	17·23	30·47	4	...	684
‡1898-99 ...	5857	42·4	15·5	10·2	28	...	543
§†1899-1900 ...	6904	50·8	15·13	7·5	15	...	682
†1900-1901 ...	6699	57·83	14·73	10·7	21	...	1146
Jan. to Dec., 1901	6827	65·13	13·90	10·18	51	...	718
1902 1st half-year	3336	69·87	11·66	12·20	85	...	183
1902 entire year	6766	70·97	12·62	9·55	21	...	443
1903 1st half-year	3443	70·96	10·49	11·27	9	...	210
1903 2nd do.	3506	70·02	12·55	7·81	5	1	204
1904 1st half-year	3522	69·54	12·99	13·31	9	2	142
1904 2nd do.	3408	66·87	12·12	15·43	9	...	181
1905 1st half-year	3359	69·51	10·98	13·22	16	...	195
1905 2nd do.	3296	68·88	10·95	12·71	3	...	243
1906 1st half-year	3485	66·1	12·5	13·09	10	...	281
1906 2nd do.	3309	62·5	14·86	13·78	4	...	288
1907 1st half-year	3468	64·6	11·85	12·75	5	...	369
1907 2nd do.	3461	62·1	11·3	12·28	4	...	493
1908 1st half-year	3581	58·9	10·1	12·62	7	...	651

† June of first year to July of second.

‡ Including Returns of Basford, Bulwell, and North Wilford for April, May, and June, 1899.

§ First Twelve Month's Return from New Parish of Nottingham.

* Nos. of births as furnished on Vaccination Returns.

Our latest Vaccination Act, which came into force on January 1st, 1908, had for its object the substitution of a statutory declaration for the certificate of conscientious objection required under section 2 of the Vaccination Act of 1898. The Act has already apparently had the effect of swelling the ranks of the conscientious objectors (see last column of vaccination table), but, as this was not an end to be desired in the public interest, and as there was no other purpose it could serve, it is somewhat difficult to justify its existence.

Measles.—Measles caused so little trouble in Nottingham during 1908 that I have but little to add to the short note on the subject already given under the heading of Registration Sub-Districts. The past year was an inter-epidemic period for this disease almost to its close, a remission of some 18 months (as in 1905–6), intervening between the close of the outbreak of 1906–7, and the commencement of that of 1908–9. A comparatively few scattered cases occurred, chiefly in the northern parts of the City, during each month of the year until the middle of August, and in this period there were 13 deaths. After this the disease seems to have almost completely disappeared until the middle of

**Deaths from Measles, during each of the Four Quarters of 1908,
in the Registration Sub-Districts of the City.**

DISTRICT	FIRST QUARTER.	SECOND QUARTER.	THIRD QUARTER.	FOURTH QUARTER.	TOTALS.
Bulwell.. ..	2	..	..	5	7
N.W... ..	2	5	2	5	14
N.E.	1	..	..	8	9
S.W. ... ..	..	1	..	..	1
S.E. ... ..	..	..	..	..	..
TOTALS	5	6	2	18	31

November, but, from then onwards, it began again to spread rapidly, first in N.W., and afterwards in N.E. and Bulwell, causing 15 deaths in these districts during the last 5 weeks of the year.

Twenty-nine out of the 31 fatal cases during 1908 occurred among children under 5 years of age. There were 9 deaths among infants under one year, and of these 7 were of males and 2 of females. There were 20 deaths of children aged from 1 to 5 years, and of these 13 were of males and 7 of females. There were 2 deaths only above the 5th year, one of each sex. Of the 31 total deaths, therefore, 21 were of males and 10 of females. The deaths of males under the 5th year are commonly more numerous than those of females, but the difference in favour of females is seldom as great as here indicated. The proportion of cases above the 5th year, when at all ages the female mortality exceeds the male, was unusually small.

With regard to school closure for measles. It is now very generally the practice to close only affected classes and departments instead of entire schools as formerly, and to exclude from attendance, besides, only those contacts under 12 years of age who have not already had the disease. This plan is now followed in Nottingham. Particulars of such school closure in Nottingham during 1908 will be found on page 44 (post). It is obvious, however, from the recurrent and practically unabated prevalence of measles, that nothing hitherto attempted in the way of prevention on a large scale has achieved the end desired. Measles is much more prevalent and fatal (both actually and relatively to cases) in town than country districts, and the explanation of these facts is, that town conditions (in the poorer districts especially) are more favourable to its spread, and less sanitary—as affecting the chances of recovery—than those which usually obtain in the country.

The death-rate per 1,000 living from measles, in Nottingham during 1908, was equal to 0·12 (12 per 100,000), as compared with 0·78 (78 per 100,000) in 1907, and an annual average of 0·40 (40 per 100,000) for the ten years 1898–1907. The death-rate per 1,000 from measles during 1908 in the 76 great towns was 0·31, in London 0·31, in the 142 lesser towns 0·20, in England and Wales as a whole 0·22, and in England and Wales less the 218 towns 0·13.

The death-rate of England and Wales from measles, therefore, without the towns and cities containing 20,000 persons and upwards, was, during 1908, less than one-third of the average annual death-rate of Nottingham from the same complaint during the ten years 1898–1907.

SCHOOL CLOSURE ON ACCOUNT OF INFECTIOUS DISEASE.

FOR MEASLES (and Whooping-Cough).

A—COUNCIL SCHOOLS.

Alfreton Road (Infants' Dept.) ...	May 4th to June 1st.
Sycamore Road („ „) ...	May 22nd to June 8th.
Scotholme (6th class) 	June 23rd to July 24th.
Berridge Road (5th class)	July 3rd to July 20th, and Nov. 10th to Nov. 30th.
Alfreton Road (5th and 6th classes)	Nov. 11th to Nov. 30th.
Carlton Road (Infants' Dept.)...	Nov. 23rd to Dec. 7th.
Sneinton Boulevard („ „)...	Dec. 3rd to Dec. 24th.
London Road („ „)...	Dec. 7th to Dec. 24th.

B—TRUST SCHOOLS.

St. Andrew's (Infants' Dept.) ...	June 25th to July 13th.
Hyson Green (Babies' Class) ...	Oct. 14th to Nov. 2nd.
Cinder Hill	Dec. 17th to Dec. 23rd.

Scarlet Fever.—The number of cases of scarlet fever notified to me during 1908 was 595. The totals for each of the preceding 5 years were respectively, 416, 611, 681, 1189, 1420. The number of separate households invaded was 530. The deaths numbered 11. Of the total 595 cases, 251 were of males and 344 of females. The deaths of males numbered 5, and those of females 6, the respective sexual case-mortalities being 1·99 and 1·74 per cent. There were 5 non-fatal cases, 2 of males and 3 of females under 1 year; 130, 57 of males and 73 of females, with 3 m. and 2 f. deaths between 1 and 5 years; 384 cases, 167 of males and 217 of females, with 2 m. and 3 f. deaths between 5 and 15 years; 45 non-fatal cases, 19 of males and 26 of females between 15 and 25 years; 25 cases, 4 of males and 21 of females, with 1 f. death between 25 and 35 years; 5 non-fatal cases, 1 m. and 4 f. between 35 and 45 years; and 1 non-fatal male case between 45 and 55 years. The highest relative mortality was, as usual, among cases between the 1st and 5th year. The total case-mortality was 1·85 per cent. The case-mortality during each of the preceding 5 years was as follows:—1907, 1·20 per cent.; 1906, 2·78 per cent.; 1905, 2·8 per cent.; 1904, 2·3 per cent.; and 1903, 2·4 per cent.

Of the 595 notified cases, 310 (or 52·1 per cent.) were removed to the City Isolation Hospital. There were 63 cases remaining in hospital at the close of 1907, and 64 at the close of 1908. There were therefore 309 cases finally dealt with during the year. There was no death among the 63 cases left over from 1907, but 8 occurred among the cases admitted during 1908, 3 deaths out of 125 male cases, and 5 out of 185 female. The male deaths were equal to 2·4 per cent. of the male cases, and the female to 2·7 per cent. of the female. Each of these case death-rates is higher than in the preceding year, and this fact is explained by the

increased severity of type which prevailed during 1908, as compared with 1907. The fact, too, that the hospital exceeded the home mortality in 1908 and 1907 is accounted for by the practice which has grown up recently of sending all the severer cases to hospital and nursing the milder at home.

The nursing of all severe, and especially of septic cases, as far as possible, in the open air, has now been carried out by us for many years with the best results, alike to the sufferers themselves, their fellow-patients and their nurses. This method of treatment has recently been adopted in other places, with results, I believe, as favourable as our own.

Notifications of Scarlet Fever, during each of the Four Quarters of 1908, in the Registration Sub-Districts of the City.

DISTRICT.			FIRST QUARTER.	SECOND QUARTER.	THIRD QUARTER.	FOURTH QUARTER.	TOTALS.
Bulwell	..	..	26	28	40	76	170
N.W...	..	..	18	20	43	74	155
N.E. ..	..	..	17	24	25	52	118
S.W. ..	..	..	11	14	13	26	64
S.E. ..	..	..	6	5	21	56	88
TOTALS	..	..	78	91	142	284	595

I have already mentioned that the distribution of scarlet fever was less even than usual in the City during 1908. The incidence was heavier in the northern than in the southern parts of the City throughout the year, but this inequality of distribution was more marked in the earlier months than later on. There were only 11 out of a total of 169 cases reported from the S.E. district during the first six months, but this number had swelled to 88 out of a total of 595 by the end of the year. The comparatively low range of variation (from 20 to 35) in the monthly numbers of cases during the first 6 months, again, and the large and continuous advance in these numbers afterwards, and up to the end of December, were other exceptional features.

The death-rate per 1,000 living from scarlet fever in Nottingham during 1908 was 0·04 (4 per 100,000). Excepting only that for 1907 (0·02) this is below any previous annual rate, and is only one quarter of the average annual rate for the 10 years, 1898-1907. The death-rate from scarlet fever in the 76 great towns during 1908 was 0·10 per 1,000, in London 0·11, in the 142 lesser towns 0·07, and in England and Wales 0·08.

Diphtheria.—There were 454 notifications of separate cases of diphtheria received by me during 1908. The numbers received in each of the preceding 5 years were, respectively, 517, 570, 537, 546, and 423. The households invaded numbered 370, as compared with 428 in 1907. The deaths were 30 in number, the lowest annual total since 1901, in which year there were 29.

Of the total of 454 persons reported as affected, 207 were males and 247 females. There were 15 deaths of each sex; the case mortality of males therefore was 7·2 per cent., and of females 6·1 per cent. The total case-mortality was 6·6 per cent., the lowest yet recorded for any full year.

There were 6 cases (4 m. and 2 f.) under one year, and 2 deaths, both of males; 98 cases (61 m. and 37 f.) between 1 and 5 years, and 11 deaths, 6 of males and 5 of females; 255 cases (109 m. and 146 f.) between 5 and 15 years, and 15 deaths, 7 of males and 8 of females; 60 cases (23 m. and 37 f.) between 15 and 25 years, and 2 deaths, both of females; 18 non-fatal cases (6 m. and 12 f.) between 25 and 35 years; 10 non-fatal cases (10 f.) between 35 and 45 years; and 4, 2, and 1 non-fatal cases, respectively (4 m. and 3 f.) in each of the ten years periods above 45. The proportion of all deaths from diphtheria which occurred under the 5th year was, contrary to recent local experience, less than the normal, at 43 per cent., but the ratio of deaths under 10 years to the total was again (as during the preceding 3 years) exceptionally high, at 90 per cent.

Our local figures do not accord with the general experience that the disease is more fatal to females than males from infancy to middle life.

The total mortality, and the case-mortality at age-periods, alike, point to a singular equality of fatal incidence upon the two sexes.

257 cases out of a total of 454 notified (57 per cent.) were admitted to the City Isolation Hospital during the year. These, with those remaining at the end of 1907, but less the number left over on December 31st, 1908, constitute the list of those finally disposed of during the year. There were 269 of these, 120 m. and 149 f.; 8 of the first and 5 of the second ended fatally.

It may seem hardly necessary to refer to the treatment of diphtheria cases with antitoxin (antitoxic serum), as the recognition of its value is now so general. But general as the recognition of its value is, it is not by any means so often used as it might and should be. The serum is now not only given to patients admitted to the City Isolation Hospital, but is also—and has been for many years—distributed gratuitously to medical men in attendance upon poor patients throughout the City who apply for it. Notwithstanding this, a considerable number of patients come to my notice every year, who, though the disease has been early recognized in them, have either not received it at all or have been injected too late to derive any benefit from it. The following quotation from the report of the Statistical Committee of the Metropolitan Asylums Board for 1907 not only emphasizes the value of the antitoxin treatment, but also the necessity for its early exhibition:—

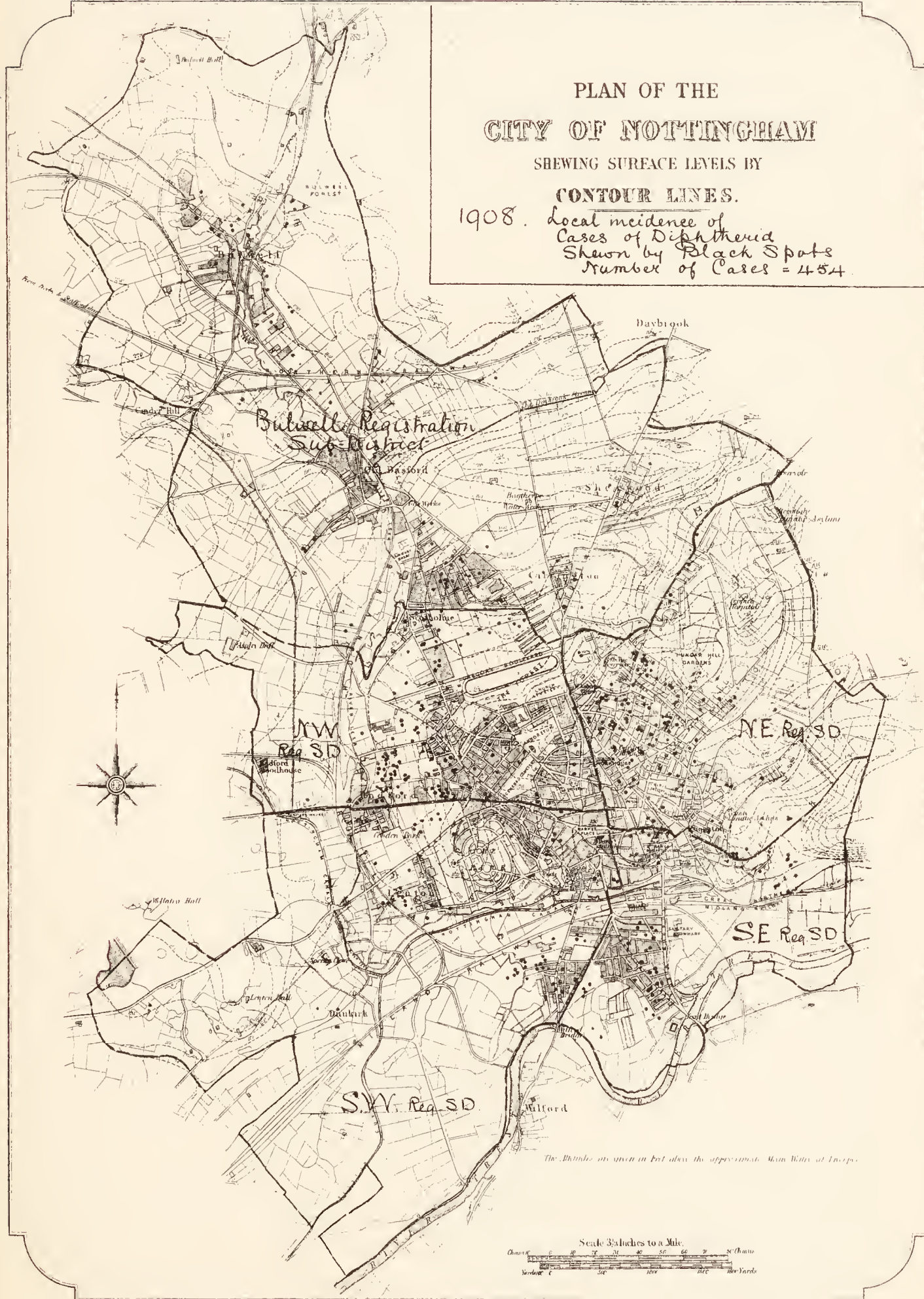
“ At the Brook Hospital it has been the practice to tabulate the results of the antitoxin treatment, with special reference to the day of the disease on which the treatment began. Amongst 250 cases treated during the years 1897-1907 on the first day of the disease, not a single death occurred; whereas, there died of 1,513 cases treated

PLAN OF THE
CITY OF NOTTINGHAM

SHewing SURFACE LEVELS BY

CONTOUR LINES.

1908. Local incidence of
Cases of Diphtheria
Shown by Black Spots
Number of Cases = 454



The Heights are given in feet above the approximate Mean Water at Liverpool.

Scale 3 1/2 inches to a Mile
Omer 0 10 20 30 40 50 60 70 80 90 100
Yards 0 100 200 300 400 500 600 700 800 900 1000

on the second day 4·29 per cent.; of 1690 cases treated on the third day 11·24 per cent.; of 1338 cases treated on the fourth day 16·89 per cent.; and of 1765 cases treated on the fifth day and afterwards 18·58 per cent.

Notifications of Diphtheria, during each of the Four Quarters of 1908, in the Registration Sub-Districts of the City.

DISTRICTS.	FIRST QUARTER.	SECOND QUARTER.	THIRD QUARTER.	FOURTH QUARTER.	TOTALS.
Bulwell	13	13	23	28	77
N.W.	38	24	22	47	131
N.E.	47	38	22	27	134
S.W.	29	17	16	10	72
S.E.	15	5	9	11	40
TOTALS	142	97	92	123	454

I have already stated that the distribution of the disease throughout the City during the year was relatively even, both as regards time and place. The accompanying spot map and table show these facts very clearly. There was, of course, some inequality in distribution. The S.E. sub-district, for example, in proportion to population had less than the average incidence, and the N.W. rather more. There was also a somewhat lower proportion of cases than usual during the summer as compared with the rest of the year.

Speaking generally, however, my first statement holds good; viz., that the distribution of the disease was comparatively general and even.

The 30 deaths from diphtheria which occurred in this City during 1908 correspond to a death-rate per 1,000 of 0·11 (11 per 100,000)—the lowest rate since 1898.

The corresponding death-rates of the preceding 5 years were, respectively, 0·16, 0·16, 0·19, 0·28, and 0·26.

Whooping-Cough.—The epidemic behaviour of whooping-cough resembles that of measles in many respects, but its fluctuations are much less regular, and its spread much more uneven and erratic, although outbreaks of both often run more or less together in the same district.

The disease was prevalent in a minor epidemic manner in Nottingham during 1908, as compared with the preceding year. Indeed, the crop of cases in 1908 were the aftermath of those in 1907. There were 22 deaths distributed over all the sub-districts during each of the first two quarters of the year, 12 deaths only in the 3rd quarter—Bulwell being free—and 8 in the last—with 1 or 2 deaths only in each sub-division.

Deaths from Whooping-Cough, during each of the Four Quarters of 1908, in the Registration Sub-Districts of the City.

DISTRICT.	FIRST QUARTER.	SECOND QUARTER.	THIRD QUARTER.	FOURTH QUARTER.	TOTALS.
Bulwell	7	4	..	2	13
N.W... ..	2	5	2	1	10
N.E.	7	6	3	1	17
S.W.	1	2	3	2	8
S.E.	5	5	4	2	16
TOTALS	22	22	12	8	64

Whooping-cough is mainly a disease of childhood, and the bulk of the victims, according to the death certificates at any rate, are children under 5 years. Dr. John Tatham gives 97 per cent. as the proportion of such children to the total number fatally attacked in England and Wales during 1907. It should not be forgotten however, that adults are sometimes affected with this disease, and that an attack is a very serious matter to an aged person.

Not the least serious feature of whooping-cough is its liability to leave behind permanent damage of certain important organs, and especially of heart and lungs—such damage being caused by the violent straining induced by the paroxysms of coughing. My aim in writing this paragraph is to emphasize the seriousness of this complaint, in order to show the necessity for the exercise of more care—than is usually displayed at the present time—by parents and others having charge of children with whooping-cough, to avoid the spread of infection by their agency.

My returns bear out the usual statement with regard to the relative mortality of this disease at certain age-periods, *e.g.*, 44 per cent. of all the deaths were of children under one, and nearly 99 per cent. of those under 5 years. Contrary to common experience, however, the deaths of females with us have not exceeded those of males. According to recent returns of the Registrar-General for England and Wales, the deaths of female children from whooping-cough are between one-quarter and one-fifth more numerous than those of males, whereas in Nottingham during 1908, out of a total of 64 deaths from this disease, 33 were of males, and 31 only of females. Like measles, again, whooping-cough is much more fatal in town than country districts.

The death-rate of whooping-cough per 1,000 of the population in Nottingham during 1908 was 0·23, as compared with rates of 0·51, 0·16, 0·24, 0·36, and 0·39 during the 5 preceding years, respectively. The whooping-cough death-rate in the 76 great towns was 0·29, in London, 0·20, in the 142 lesser towns, 0·25, and in England and Wales, 0·27, during 1908.

Enteric Fever.—The sections on enteric fever and diarrhoea in my Annual Reports have, for many years, been little more than one long indictment of the

dry-closet system—pail or privy—and all I need urge by way of excuse for this is the practically undiminished continuance of the dry-system in the City.

The public, and even members of the medical profession, have been so long accustomed to look to certain definite channels of infection, like water-supplies and shell-fish, for the conveyance of the typhoid poison to the human intestine, that they are apt to forget the obvious fact, that by far the greater part of the enteric fever occurring in this and other countries, is not propagated in this manner, and that, provided the poison be swallowed in sufficient dose, it matters little with what vehicle it is taken in. Not the most thorough and scientifically devised precautionary measures can effectually protect against infection, a certain proportion of those who—like the nurses of enteric fever hospitals—are closely associated with persons suffering from the disease. In such towns as Nottingham, and in other places—like military camps, for instance—where dry-systems of excrement disposal are in use, the urine and fœces of all cases of enteric fever before diagnosis, and of all undetected cases, are disposed of without special precautions; and the resulting contamination of soil and atmosphere, of the human clothing and persons, and of food and habitation, through the agency of dirty, careless habits, and through flies and dust in warm weather, explains the spread of infection when once the fever has obtained a footing.

However much we may improve the methods, and increase the efficiency of our public scavenging, and we have done both to a very large extent in recent years, we cannot entirely obviate the risk of infection by such means as those I have just mentioned; and a town therefore, with pail-closets and privies, must be subject to endemic extension of enteric fever, so long as the disease exists within its borders, or invades them occasionally from without.

It will be interesting now to compare the past and present enteric fever death-rates of Nottingham, which retains its dry-closets, with those of the other great towns which have either already converted theirs, or are engaged in doing so.

The death-rate of Nottingham from enteric fever was rather below the mean rate of the other large cities taken together in the seventies—the Nottingham rate was then about 45 per 100,000, as compared with 48 per 100,000 in the then great towns. The enteric fever death-rates of the great towns all declined from this period onwards, but, whereas the mean rate of the great towns had fallen to 20 per 100,000 in the last year of the century, the rate of Nottingham had only declined to 29, *i.e.*, the mortality was 45 per cent. more in Nottingham than in these towns as a whole.

During the decade ended with 1907, the average enteric fever death-rate per 100,000 in Nottingham was 24, as compared with 10 in the great towns, and during 1908 the rate in Nottingham (11 per 100,000), though the lowest rate but one on record for Nottingham, was still 36 per cent. in advance of that in the great towns (8 per 100,000).

The case of Leicester in this connection affords an excellent object lesson to Nottingham. Leicester, formerly, had a large number of dry closets like Nottingham, but it began their conversion to W.C.'s many years ago, and has now completed it. In the seventies the average enteric fever death-rate of Leicester was slightly below that of Nottingham, and its diarrhoea death-rate was twice as high. During 1908 the enteric fever death-rate of Leicester was only 3, while ours was 11 per 100,000, and during the previous 10 years (1898–1907) the average enteric fever rate of Leicester was 8, whereas ours was 24 per 100,000. The average diarrhoea mortality of Leicester is now considerably below that of Nottingham.

There are many who believe that much of the enteric fever in our City is caused by shell-fish. I would call the attention of such people to the above figures, and also to the further fact that the shell-fish supplies of Nottingham and Leicester are practically identical, alike as to source and quantity.

The number of cases of enteric fever notified to me during 1908 was 237, as compared with 231 in 1907, and an annual average of 286 during the preceding five years. The attack rate per 1,000 of population was equal to 0·91 (91 per 100,000). This is a very low rate for Nottingham, lower, in fact, than any previous annual rates excepting those of 1907 (0·897) and 1903 (0·81).

Nottingham, 1908. Enteric Fever. Cases and Deaths in Weekly Periods.

Week ending	January.				February.					March.				April.				May.					June.				
	4	11	18	25	1	8	15	22	29	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20	27	
Cases ..	8	6	1	4	2	6	1	3	5	2	5	4	6	3	2	3	2	..	3	4	5	1	1	2	6	4	= 89*
Deaths ..	2	2	1	..	2	..	1	1	..	..	..	1	2	..	..	..	..	..	..	..	..	1	..	..	2	1	= 16*

Week ending	July.				August.					September.				October.				November.				Decmbr.				Jan.		
	4	11	18	25	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14	21	28	5	12	19	26		2
Cases ..	10	2	5	7	1	1	3	8	9	5	8	3	7	5	7	5	9	6	12	7	3	4	7	7	2	5	1	= 149*
Deaths	..	..	1	1	1	1	1	..	..	1	..	..	1	..	1	1	1	..	..	..	..	1	..	1	..	..	1	= 13*

* Figures made up from weekly returns, without correction.

The accompanying table gives the weekly number of cases and deaths, when these occurred, throughout the year. From this table it will be seen that there was only one week, that ending May 2nd, in which no case occurred. There were 89 cases in the first half-year, with 16 deaths ; and 149 cases in the second, with 13 deaths. Several of the deaths, however, in the first period, were those of cases commencing before the close of 1907, and several of the cases beginning towards the end of 1908 had a fatal issue in 1909.

The disease was, as usual, very generally distributed over most of the poorer districts of the City, but groups of cases occurred, marking foci of local infection, in the following localities :—

- (1) Hutton Street, Colwick Road.
- (2) Narrow Marsh (Red Lion Street) and Leen Side district.
- (3) The Meadow Platts and Colwick Street district (30 cases).
- (4) The Sneinton district to the S. of the last.
- (5) The General Hospital (3 cases).
- (6) Cobden Park and Old Radford.
- (7) The parts of New Radford bordering on Ilkeston Road.
- (8) The district extending between (6) and (7) and Basford.
- (9) The upper end of Quarry Road.

On page 58 will be found tables of cases and deaths for each sex at various age periods, during 1908 and each of the two preceding years. Noticeable features in the table for 1908 are, the low case mortality of females in the 15–25 years age-period, and the relatively low case mortality for all cases of both sexes—1 in 8·2. This last case-death-rate expressed as a percentage would be equal to 12, as compared with 16 per cent. in 1907, 14 per cent. in 1906, and 10 per cent. in 1905. The female case mortality is usually somewhat higher than the male, the average female rate for the country as a whole being about 19 per cent., and the average male rate about 17 per cent. The average female rate in Nottingham during the past three years has been 15 per cent., and the average male rate 14 per cent. The numbers of cases and deaths upon which these rates are calculated are too small to form a basis for any general deductions, but they show, at least, that during these three years, the degree of fatality for both sexes has been considerably below the average.

The deaths registered as due to enteric fever in Nottingham, as already stated, numbered 29, and correspond to a death-rate of 0·11 per 1,000 (11 per 100,000). The rates for the preceding five years had been respectively 0·15, 0·16, 0·09, 0·23, and 0·14 per 1,000. The rate for 1908 is only 0·02 per 1,000 above the lowest rate on record (0·09 in 1905).

The death-rate from enteric fever during 1908 was equal to 0·08 in the 76 great towns, 0·05 in London, 0·08 in the 142 smaller towns, and 0·07 in England and Wales.

There were six cases—two each in January and February, and one each in July and August—in which there was a definite history of the eating of shell-fish (mussels) prior to attack; and as Dr. F. H. Jacob isolated from mussels belonging to the same consignment as those which had been eaten by two of the patients a bacillus which gave the reaction of the typhoid bacillus, it seems very probable that the disease in these cases at any rate was caused by the mussels. Except in these few cases, however, there was no definite antecedent history of the ingestion of shell-fish, or other suspected article of food or drink; and I was constrained, as stated in the earlier part of this article, to fall back for causative theory upon what I believe to be the usual method of propagation for enteric fever infection in cities like Nottingham, viz., the fouling of all the physical surroundings of human life with the contents of our pail-closets.

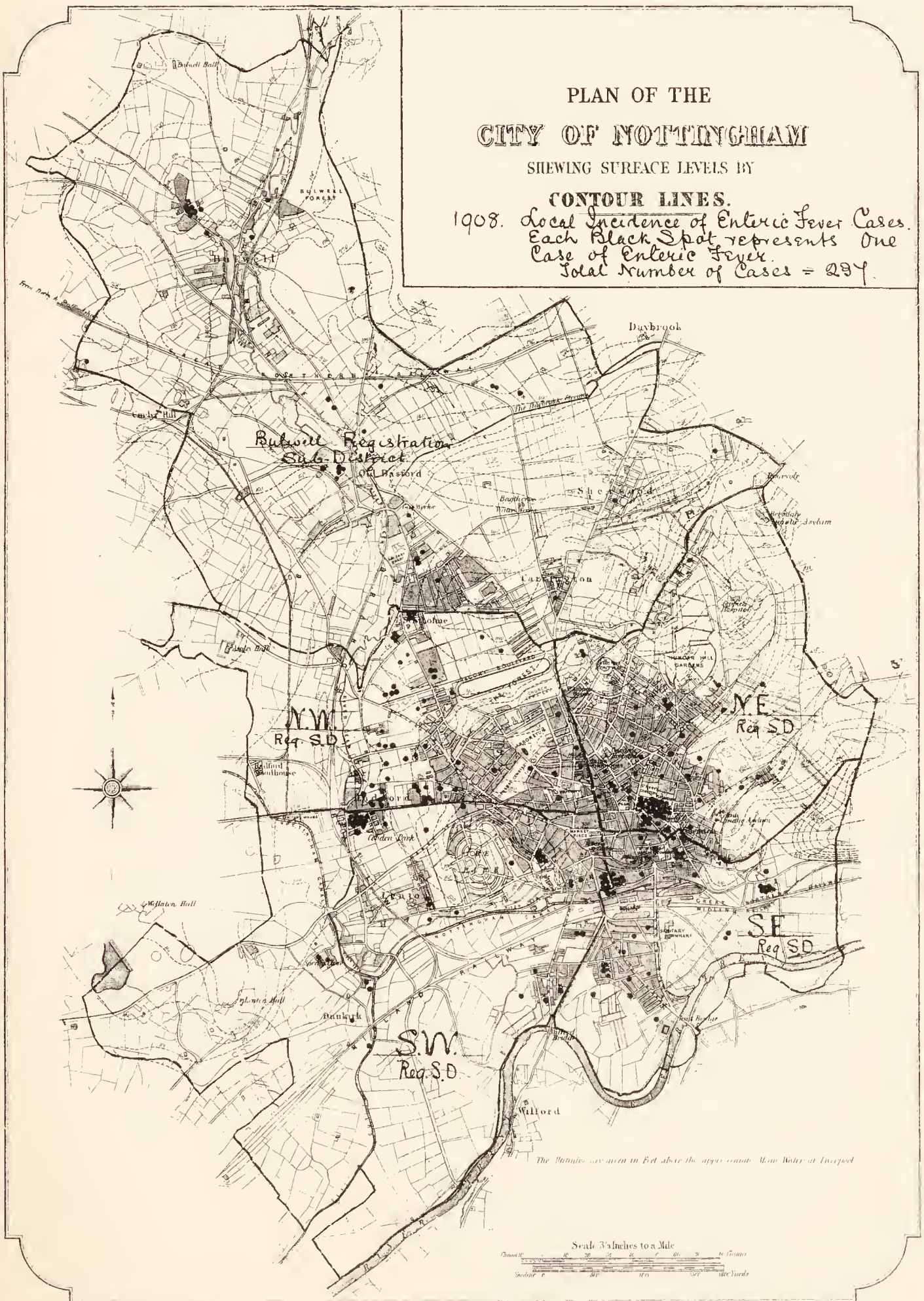
I give once more, with this article, a table showing the actual and proportional incidence of enteric fever upon human dwellings furnished with various types of closet, from 1887 to 1908, inclusive. The table speaks for itself as an argument in support of my contention that the dry-closet plays a very important part in spreading the disease.

PLAN OF THE CITY OF NOTTINGHAM

SHewing SURFACE LEVELS BY

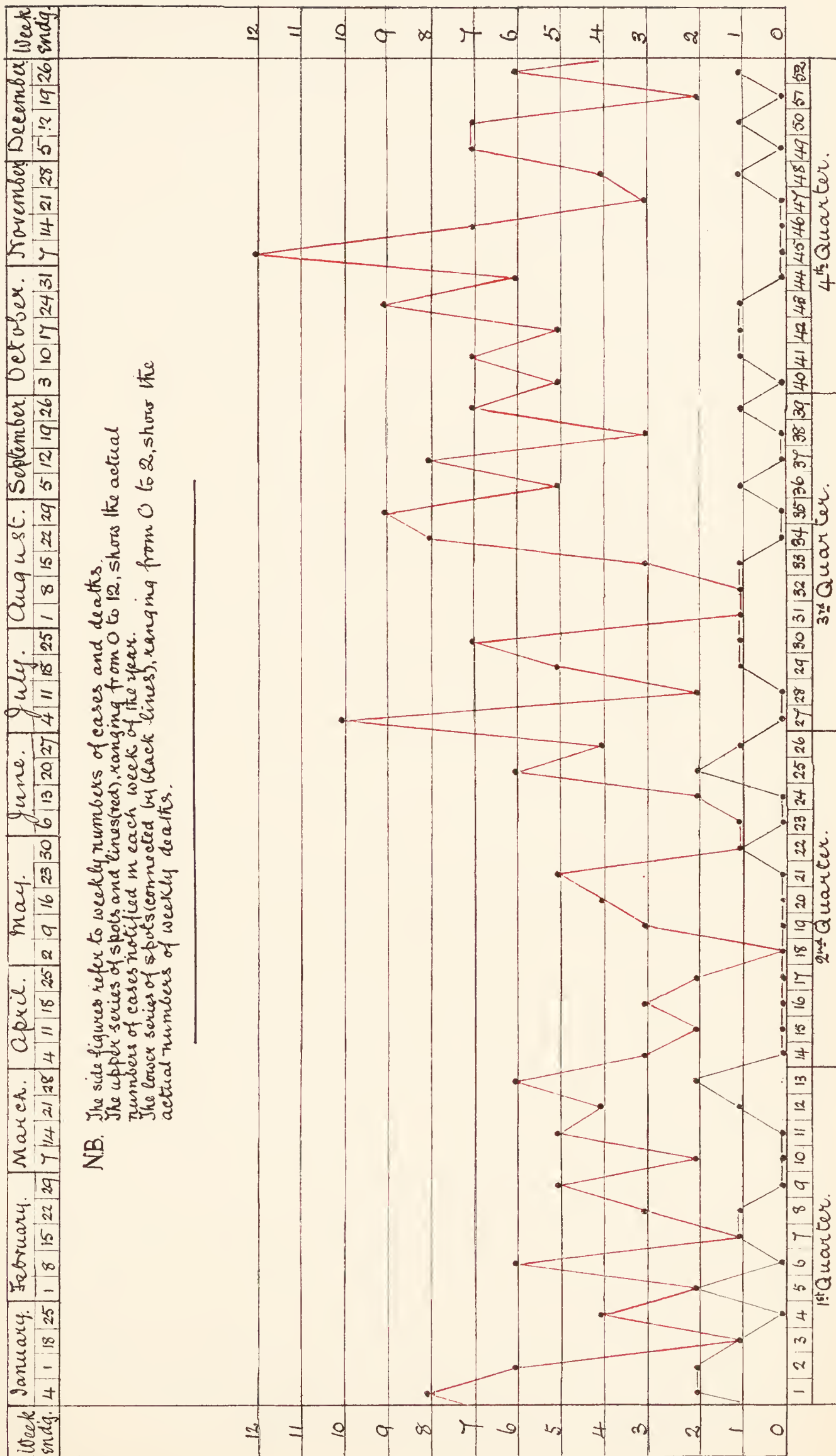
CONTOUR LINES.

1908. Local Incidence of Enteric Fever Cases.
Each Black Spot represents One
Case of Enteric Fever.
Total Number of Cases = 237.



Nottingham, 1908.

Enteric Fever. Weekly numbers of Cases and Deaths.



**Incidence of Enteric Fever Cases upon Houses with Pail-closets,
Midden-privies, and W.c.'s, from 1887 to 1908, and upon
Waste-water-closets during 1905-08.**

1887 to 1898 (Average).

Houses with pail-closets	...	1 case of enteric fever in 120 houses.
„ midden-privies	... 1 „ „ „	37 „
„ water-closets	... 1 „ „ „	558 „

1899.

Houses with pail-closets	...	...	1 case in 70 houses.
„ midden-privies	... ..	1 „	18 „
„ water-closets	... ..	1 „	296 „

1900.

Houses with pail-closets	...	...	1 case in 92 houses.
„ midden-privies	... ..	1 „	20 „
„ water-closets	... ..	1 „	407 „

1901.

Houses with pail-closets	...	...	1 case in 84 houses.
„ midden-privies	... ..	1 „	12 „
„ water-closets	... ..	1 „	255 „

1902.

Houses with pail-closets	...	...	1 case in 129 houses.
„ midden-privies	... ..	1 „	21 „
„ water-closets	... ..	1 „	294 „

1903.

Houses with pail-closets	...	...	1 case in 267 houses.
„ midden-privies	... ..	1 „	50 „
„ water-closets	... ..	1 „	504 „

1904.

Houses with pail-closets	...	...	1 case in 166 houses.
„ midden-privies	... ..	1 „	50 „
„ water-closets	... ..	1 „	407 „

1905.

37,048 houses with pail-closets	...	204 cases ...	1 case in 181 houses.
400 „ midden-privies	4 „	... 1 „	100 „
12,000 „ water-closets	21 „	... 1 „	571 „
6,785 „ waste-w.c.'s	26 „	... 1 „	261 „

1906.

36,886 houses with pail-closets	...	231 cases ...	1 case in 160 houses.
300 „ midden-privies	3 „	... 1 „	100 „(cir.)
14,000 „ water-closets	21 „	... 1 „	667 „
6,785 „ waste-w.c.'s	30 „	... 1 „	226 „

1907.

36,697 houses with pail-closets	...	177 cases ...	1 case in 207 houses.
200 „ midden-privies	11 „	... 1 „	18 „(cir.)
18,395 „ water-closets	25 „	... 1 „	736 „
6,785 „ waste-w.c.'s	18 „	... 1 „	377 „

1908.

36,531 houses with pail-closets	...	197 cases ...	1 case in 185 houses.
100 „ midden-privies	3 „	... 1 „	33 „(cir.)
19,944 „ water-closets	25 „	... 1 „	798 „
6,785 „ waste-w.c.'s	12 „	... 1 „	565 „

NOTTINGHAM.
Enteric Fever. Cases and Deaths (distinguishing Males and Females) in Age-Periods.
1906.

			0-1 yrs.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75.	Totals at all Ages.
CASES	{	Male .. ..	..	8	49	35	31	11	10	1	..	..	145
		Female	1	7	45	36	28	15	6	2	..	..	140
													285
DEATHS	{	Male .. ..	..	1	1	6	7	2	3	1	..	..	21
		Female .. ..	..	..	7	3	5	2	2	..	..	..	19
													40
NO. OF CASES TO ONE DEATH IN AGE-PERIODS.													No. of Cases to one Death at all Ages.
Male .. ..			..	8.0	49.0	5.8	4.4	5.5	3.3	1.0	..	..	6.9
Female .. ..			..	..	6.4	12.0	5.6	7.5	3.0	..	..	..	7.4
													7.1

1907.

		0-1 yrs.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75.	Totals at all Ages.
CASES	Male ..	1	10	28	37	36	10	7	..	..	..	129
	Female ..	..	6	25	31	13	12	9	6	..	..	102
												231
DEATHS	Male ..	1	1	3	6	6	..	1	..	..	..	18
	Female ..	..	1	4	3	5	2	2	2	..	..	19
												37
NO. OF CASES TO ONE DEATH IN AGE-PERIODS.												No. of Cases to one Death at all Ages.
Male ..	..	1.0	10.0	9.3	6.2	6.0	..	7.0	..	..	..	7.2
Female ..	..	..	6.0	6.2	10.3	2.6	6.0	4.5	3.0	..	..	5.4
												6.2

1908.

		0-1 yrs.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75.	Totals at all Ages.
CASES	Male ..	..	7	32	34	21	14	13	3	..	..	124
	Female ..	..	6	42	32	20	9	3	1	..	..	113
												237
DEATHS	Male ..	..	..	3	3	2	6	2	1	..	..	17
	Female ..	..	..	7	1	3	1	..	..	..	..	12
												29
NO. OF CASES TO ONE DEATH IN AGE-PERIODS.												No. of Cases to one Death at all Ages.
Male ..	..	..	10.6	11.3	10.5	2.3	6.5	3.0	..	..	7.3	8.2
Female ..	..	..	6.0	32.0	6.6	9.0	..	..	..	..	9.4	

NOTTINGHAM, 1908.

ENTERIC FEVER.—Cases and Deaths, Male and Female, during each of the Four Quarters of the Year in Registration Sub-Districts.

		FIRST QUARTER.		SECOND QUARTER.		THIRD QUARTER.		FOURTH QUARTER.		TOTALS.				
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Both Sexes.		
Bulwell	{ Cases Deaths }	6 2	4 1	5 1	3 ...	7 2	1 ...	5 1	3 ...	23 6	11 1	34 7	Cases } Deaths }	Bulwell
N.W.	{ Cases Deaths }	5 1	6 ...	5 ...	6 1	9 ...	6 ...	9 1	5 ...	28 2	23 1	51 3	Cases } Deaths }	N.W.
N.E. ...	{ Cases Deaths }	5 2	2 ...	3 ...	6 1	9 1	14 2	11 2	17 1	28 5	39 4	67 9	Cases } Deaths }	N.E.
S.W. ...	{ Cases Deaths }	14 3	6 1	3 ...	4 1	3 ...	4 2	6 ...	6 ...	26 3	20 4	46 7	Cases } Deaths }	S.W.
S.E. ...	{ Cases Deaths }	2 1	3 1	1 ...	2 ...	8 ...	10 ...	10 ...	3 1	21 1	18 2	39 3	Cases } Deaths }	S.E.

NOTTINGHAM, 1893-1908.

GENERAL ENTERIC FEVER DATA.

YEAR.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
Population ..	220,551	223,584	226,659	229,775	232,935	236,139	239,384	237,770	240,438	243,191	245,993	248,811	251,677	254,567	257,492	260,449
Cases of Enteric Fever ..	479	334	422	444	428	423*	607*	505*	535*	375*	200*	296*	255	285	231	237
Attack or Case rate ..	2.17	1.49	1.86	1.93	1.83	1.79	2.53	2.12	2.22	1.54	0.812	1.19	1.01	1.12	0.897	0.910
Deaths from Enteric Fever ..	68	61	55	75	45	53	114	75	79	50	36	57	24	40	37	29
Death-rate from Enteric Fever..	0.31	0.28	0.24	0.34	0.21	0.22	0.48	0.32	0.329	0.21	0.14	0.23	0.09	0.16	0.15	0.11
Mean air temperature ..	49.0	47.9	47.0	48.2	48.1	49.2	48.3	47.269	46.534	46.67	47.7	48.4	48.3	49.4	48.1	48.7
Rainfall in inches	20.165	20.252	20.753	22.992	23.726	19.750	22.635	26.823	21.401	21.524	32.368	19.733	20.010	23.938	25.651	22.703
Death-rates from Enteric Fever in great towns..	0.24	0.19	0.20	0.19	0.18	0.20	0.22	0.20	0.17	0.15	0.12	0.10	0.08	0.09	0.07	0.08

* Number obtained from Weekly Returns of Notifications without subsequent correction.

NOTTINGHAM, 1903-1908. ENTERIC FEVER. Onsets of Cases, with Mean Temperature of Air, and Rainfall, in Four-Weekly Periods. * Five-weekly period.

1903	Four-weekly periods ending			Jan. 24.	Feb. 21.	March 21.	April 18.	May 16.	June 13.	July 11.	Aug. 8.	Sept. 5.	Oct. 3.	Oct. 31.	Nov. 28.	Dec. 26.	TOTALS.
	Mean Temperature ..			36.9	44.6	41.7	43.6	45.3	52.9	56.8	57.1	55.8	54.0	49.3	42.9	38.5	47.6
	Rainfall in Inches ..			1.862	0.353	2.746	1.513	4.407	0.929	1.354	2.107	5.141	2.868	6.205	1.882	0.882	32.249
	Cases of Enteric Fever ..			16	14	17	6	8	6	9	17	20	15	31	21	21	200
1904	Four-weekly periods ending			Jan. 30.	Feb. 27.	March 26.	April 23.	May 21.	June 18.	July 16.	Aug. 13.	Sept. 10.	Oct. 8.	Nov. 5.	Dec. 3.	Dec. 31.	TOTALS.
	Mean Temperature ..			38.8	38.4	39.2	46.8	50.1	55.9	61.2	63.1	58.1	52.6	48.9	39.1	37.2	48.4
	Rainfall in Inches ..			1.65	3.19	1.21	1.52	0.42	1.36	0.37	2.48	3.01	1.51	0.40	1.07	1.53	19.733
	Cases of Enteric Fever ..			20	28	21	31	18	7	11	23	59	31	21	19	6	295
1905	Four-weekly periods ending			Jan. 28.	Feb. 25.	March 25.	April 22.	May 20.	June 17.	July 15.	Aug. 12.	Sept. 9.	Oct. 7.	Nov. 4.	Dec. 2.	Dec. 30.	TOTALS.
	Mean Temperature ..			37.0	40.9	43.6	44.1	49.3	54.8	63.5	61.6	58.7	51.0	44.1	39.8	39.5	48.3
	Rainfall in Inches ..			0.77	0.58	2.36	1.63	0.73	2.26	1.22	2.16	2.68	1.47	1.38	2.06	0.69	20.010
	Cases of Enteric Fever ..			9	25	16	17	13	28	26	29	22	16	26	13	14	254
1906	Four-weekly periods ending			Jan. 27.	Feb. 24.	March 24.	April 21.	May 19.	June 16.	July 14.	Aug. 11.	Sept. 8.	Oct. 6.	Nov. 3.	Dec. 1.	Dec. 29.	TOTALS.
	Mean Temperature ..			39.7	38.1	43.0	44.5	47.5	54.3	59.7	64.0	64.7	54.4	50.1	45.2	37.0	49.4
	Rainfall in Inches ..			2.88	1.59	2.05	0.19	1.54	1.68	1.10	0.57	0.91	2.32	3.59	2.64	2.41	23.938
	Cases of Enteric Fever ..			20	19	15	9	9	9	12	19	38	44	48	34	16	292
1907	Four-weekly periods ending			Jan. 26.	Feb. 23.	March 23.	April 20.	May 18.	June 15.	July 13.	Aug. 10.	Sept. 7.	Oct. 5.	Nov. 2.	Nov. 30.	Dec. 28.	TOTALS.
	Mean Temperature ..			37.4	36.3	41.7	46.1	50.7	52.9	53.3	61.0	57.2	56.5	49.0	43.1	40.5	48.1
	Rainfall in Inches ..			1.08	1.69	1.37	1.61	2.39	2.96	2.03	2.26	2.26	0.21	3.48	1.80	2.75	25.651
	Cases of Enteric Fever ..			10	14	15	12	9	5	7	3	7	27	78	23	21	231
1908	Four-weekly periods ending			Jan. 25.	Feb. 22.	March 21.	April 18.	May 16.	June 13.	July 11.	Aug. 8.	Sept. 5.	Oct. 3.	Oct. 31.	Nov. 28.	Jan. 2.*	TOTALS.
	Mean Temperature ..			34.6	41.6	38.5	43.2	48.1	57.5	58.5	60.8	55.8	57.4	52.6	45.4	38.8	48.7
	Rainfall in Inches ..			0.91	1.18	1.61	2.18	3.49	1.28	1.96	1.72	3.53	1.06	0.82	1.30	1.43	22.703
	Cases of Enteric Fever ..			19	12	16	14	9	9	22	14	25	23	27	26	22	238

Eighty-one patients with enteric fever were admitted to Bagthorpe Isolation Hospital during 1908, and 41 were left in the institution at the close of 1907. There were, therefore, 122 patients under treatment with the disease in the hospital during the year; but, as 23 of these were still there at the close of 1908, we must subtract them from the above total in order to obtain the number of those finally disposed of during the year. Having done this, we are left with 99 patients to account for. Forty-one of these (26 m. and 15 f.) were the patients left over from 1907. These all recovered. Of the other 58 (24 m. and 34 f.), 50 recovered (20 m. and 30 f.), and 8 died (4 of each sex).

Cases of enteric fever were also admitted to the General Hospital and the Union Workhouse Infirmary. Eighty-eight were admitted to the General Hospital (47 m. and 41 f.), and 12 ended fatally (8 m. and 4 f.) Fifteen were admitted at the Union Workhouse (4 m. and 11 f.), and 5 of these (2 m. and 3 f.) ended fatally.

Diarrhœa.—What I have said of enteric fever in the previous section may be said with slight variation, also, of diarrhœa. Dirt, poverty, overcrowding, lack of sunlight and ventilation, hand-feeding of infants, hot and dry weather, and dry and porous soils (like our own) polluted with organic matter, are some of the more prominent factors in the production of excessive mortality from epidemic diarrhœa. Towns are necessarily, therefore, the centres of its chief activity. Towns with effective, frequent scavenging, and with a water-carriage system for the disposal of night-soil sewage—other things being equal—have a decided advantage in this regard over those with defective scavenging and dry closet systems.

The truth of this statement is strikingly borne out by the history of the relative diarrhœa mortality in many of our large towns in recent years. Manchester,

Salford, Birmingham, and Leicester have greatly reduced their diarrhœa mortality by radical reforms in this direction, and especially by the conversion, or partial conversion, of their dry closets. Nottingham, as I have said, has done well to improve its system of collecting and disposing of refuse, but it would have done better to abandon its dry closets altogether, and substitute W.C.'s.

Up to almost the close of the nineteenth century, Nottingham held its own, and its diarrhœa mortality compared favourably with that of almost all the great towns with which it can be fairly compared; but since this time, although it has improved, it has not improved so rapidly as many other places in this respect—and especially Leicester—and I am strongly of opinion that our position in the race is largely due to our retention of the pail-system of excrement disposal which our neighbours have abandoned.

Of all recent charitable efforts directed to the improvement of the conditions surrounding infant life in the poorer (or poorest) parts of the City, and thereby of diminishing the diarrhœa death-rate of infants, there is probably none holding brighter promise than the Mothers' and Babies' Welcome Scheme, for the succouring and instructing of recent mothers, which was launched for Nottingham in July, 1908, by the instrumentality of a committee of local ladies and gentlemen, with Mrs. Macdonald, of Tollerton, as Chairman. The operation of the Notification of Births Act, and the support given to the scheme by the Health and Estates Committees of the Corporation and the Social Guild Institution, have all contributed to its success, but though these have helped, they did not make the scheme.

Some account of the immediate and future object and aim of the "Welcome," and of the excellent work it has done since its opening, will be found under the

heading of the Notification of Births Act on pp. 131 to 136 of this Report. I will only repeat here, that breast-milk, personal and domestic cleanliness, and fresh air, are three things the essential value of which in this connection the poor are slow to learn, but must be effectively taught if they are to improve—by their own action—from within.

The deaths attributed to epidemic diarrhœa in Nottingham during 1908 were 171 according to my returns, and 169 according to those of the Registrar-General. The difference of two is negligible, and I shall, as usual, adopt the figure of the Registrar-General in this article, to allow of a just comparison of the Nottingham figures with those of other places for which the Registrar-General furnishes returns.

NOTTINGHAM, 1908.

Weekly Deaths from Diarrhœa (during Diarrhœa season) in Registration Sub-Districts.

	WEEK ENDING																			
	July.				August.					Sept.				October.					Nov.	
	4	11	18	25	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14
Bulwell	1	..	2	1	..	1	1	2	2	..	2	..	1	..	..	1	1	..	..	1
N.W.	1	1	..	1	..	1	2	3	3	2	1	1	1	2	2	2	3	..	1	..
N.E.	..	2	..	..	2	2	4	7	3	5	3	1	3	3	3	4	2	1	1	..
S.W.	..	1	..	..	..	1	3	3	3	1	2	..	2	..	2	..	..	1	..	2
S.E.	..	..	1	..	1	3	2	4	2	1	..	2	1	3	2	2	..	2	2	1
	2	4	3	2	3	8	12	19	13	9	8	4	8	8	9	9	6	4	4	4
																				— 139

The 169 deaths from diarrhœa in Nottingham, above mentioned, were equal to a death rate per 1,000 of 0.64 (64 per 100,000), as compared with rates of 0.63, 1.48, 0.76, 1.37, and 0.68 during the preceding 5 years, respectively, and an average rate of 1.13 for the 10 years ended with 1907.

The death-rate per 1,000 from diarrhœa in the 76 great towns during 1908 was equal to 0.65, in London to 0.53, in the 142 smaller towns to 0.52, in England and Wales as a whole to 0.50, and in England and Wales less the 218 towns to 0.33.

The diarrhœa death-rate of Nottingham for 1908 was lower by comparison with the past than the other rates above given, and this is explained by the fact that the local summer and autumn season was relatively cool and wet throughout—to an exceptional extent as compared with other places. There was, too, a specially heavy rainfall of 3 inches during the 3 weeks ended with July 18th, which preceded the warmer and drier spell of August, and this heavy rainfall had the effect of cooling the sub-soil during the hotter period, and thus of keeping down the diarrhœa mortality.

All the rates for other places which I have given for comparison, are considerably higher than those of 1907, whereas the 1908 Nottingham rate is only 0·01 higher than that of 1907.

One hundred and forty-two of all the deaths (78 of males and 64 of females) were those of infants under one year of age. These are equal to 84 per cent. of the total—the same proportion as in 1907, but higher by 9 per cent. and 2 per cent., respectively, than the corresponding proportions of the two preceding years. Eighteen deaths (11 of males and 7 of females) occurred between the 1st and 5th year of age. These were equal to 10·6 per cent of all, as compared with 12·3 per cent. in 1907. Eleven deaths (6 of males and 5 of females) occurred after the 5th year, and 9 of these were at ages of 65 and upwards. These 11 deaths were equal to 6·5 per cent. of all, as against 4 per cent. in 1907.

The deaths of infant males from diarrhœa are commonly more numerous than those of infant females, and such has been the case during 1908 and other recent years in Nottingham, and during 1908 the male mortality preponderated up to the end of the 5th year, which is unusual, the female deaths being ordinarily more numerous after the 3rd year, and until middle age.

The actual numbers of deaths of males and females from diarrhœa during the past 4 years have been as follows :—

1908,	95	males	and	76	females.
1907,	84	„	„	71	„
1906,	206	„	„	169	„
1905,	108	„	„	94	„

The 142 deaths which occurred during the first year of life were distributed in its successive quarters as follows:—1st quarter, 46 (33 m. and 13 f.); 2nd quarter, 49 (26 m. and 23 f.); 3rd quarter, 25 (14 m. and 11 f.); and 4th quarter, 22 (9 m. and 13 f.) The minimal numerical ratios are here 4·6, 4·9, 2·5, and 2·2, as compared with 13, 25, 19, and 8; 6, 11, 7, and 3; and 3, 4, 3 and 2 in successive quarters of the three preceding years, respectively. The larger number of deaths with us is usually in the 2nd quarter, and this I believe to be due to the fact that a greater number of infants are deprived, or partially deprived of their natural food during this period, than in any other quarterly division of the 1st year of life.

Following this article will be found the usual tables of weekly deaths from epidemic diarrhœa which occurred in Nottingham during the period of seasonal prevalence, with the records of rainfall, and superficial (1 ft.) and deep (4 ft.) earth temperatures for each throughout the same period. The maximum weekly mortality, as usual, followed rapidly after the record of maximum earth temperature, but the number of weekly deaths fell away again speedily as the latter declined.

As already stated, the heavy rainfall (3 inches) of the three weeks ended with July 18th, probably had the effect of reducing the amount and the duration of the high earth temperature, in the relatively hot and dry period which followed that in which the exceptional rainfall occurred.

RAINFALL, TEMPERATURE, and DIARRHŒA DEATH, (DURING DIARRHŒA SEASON).

1903.

	WEEK ENDING																		
	July 4	July 11	July 18	July 25	Aug. 1	Aug. 8	Aug. 15	Aug. 22	Aug. 29	Sept. 5	Sept. 12	Sept. 19	Sept. 26	Oct. 3	Oct. 10	Oct. 17	Oct. 24	Oct. 31	Nov. 7
Earth Tem- perature 1 ft. below surface ..	62.8	62.1	60.9	60.5	59.8	59.3	59.6	57.4	56.2	57.6	55.0	51.4	56.6	56.8	53.8	50.4	49.6	48.4	45.6
Earth Tem- perature 4 ft. below surface ..	55.0	56.4	55.8	53.0	57.9	57.9	58.0	57.9	57.1	56.9	57.1	54.1	54.1	56.1	55.9	53.0	53.0	51.9	50.9
Deaths from Diarrhœa	2	5	2	3	6	8	5	18	14	13	16	11	7	7	10	4	6	4	2

1904.

	WEEK ENDING																		
	July 9	July 16	July 23	July 30	Aug. 6	Aug. 13	Aug. 20	Aug. 27	Sept. 3	Sept. 10	Sept. 17	Sept. 24	Oct. 1	Oct. 8	Oct. 15	Oct. 22	Oct. 29	Nov. 5	Nov. 12
Rainfall ..	0.09	0.09	0.26	1.73	0.32	0.17	1.20	1.16	0.57	0.08	0.26	0.35	0.84	0.06	0.08	0.19	0.07	0.08	0.60
Earth Tem- perature 1 ft. below surface ..	62.2	67.4	66.8	63.5	66.5	60.9	57.3	56.5	60.0	57.9	58.4	54.7	57.9	49.3	47.9	51.0	47.1	47.8	46.3
Earth Tem- perature 4 ft. below surface ..	55.6	57.4	58.7	59.5	60.1	60.7	59.4	58.4	58.2	58.2	57.4	56.9	55.9	54.5	53.1	52.4	51.9	51.0	50.2
Deaths from arrhœa	3	1	4	12	30	48	62	54	31	18	19	8	9	9	3	3	3	1	1

1905.

	WEEK ENDING																		
	July 1	July 8	July 15	July 22	July 29	Aug. 5	Aug. 12	Aug. 19	Aug. 26	Sept. 2	Sept. 9	Sept. 16	Sept. 23	Sept. 30	Oct. 7	Oct. 14	Oct. 21	Oct. 28	Nov. 4
Rainfall ..	0.38	0.01	0.63	0.03	0.56	0.99	0.58	0.65	0.61	0.65	0.77	0.01	0.01	0.70	0.75	0.05	0.27	0.25	0.81
Earth Tem- perature 1 ft. below surface ..	60.3	63.2	67.5	66.1	65.1	61.1	60.3	61.0	59.7	58.1	58.4	54.0	53.3	51.8	47.1	49.7	42.6	40.3	44.2
Earth Tem- perature 4 ft. below surface ..	53.2	57.4	58.9	60.7	61.2	61.2	60.3	60.1	60.1	59.5	58.9	58.2	56.7	55.6	54.3	53.1	51.1	48.4	47.2
Deaths from arrhœa	1	..	5	8	12	19	26	20	16	16	6	7	15	3	1	1	..	5	1

RAINFALL, TEMPERATURE, and DIARRHŒA DEATHS, (DURING DIARRHŒA SEASON).

1906.

	WEEK ENDING																		
	July 7	July 14	July 21	July 28	Aug. 4	Aug. 11	Aug. 18	Aug. 25	Sept. 1	Sept. 8	Sept. 15	Sept. 22	Sept. 29	Oct. 6	Oct. 13	Oct. 20	Oct. 27	Nov. 3	Nov. 10
Rainfall ..	..	0.20	0.07	0.24	0.22	0.04	0.46	0.39	0.00	0.06	0.74	0.18	0.00	1.40	0.92	1.50	0.42	0.75	1.69
Earth Temperature 1 ft. below surface ..	61.8	61.9	60.4	65.0	65.0	65.4	61.1	62.2	63.4	65.1	58.6	55.9	50.3	54.4	55.9	49.1	49.5	46.3	45.6
Earth Temperature 4 ft. below surface ..	56.1	57.8	57.6	58.4	59.6	60.5	60.8	60.0	60.1	61.3	61.0	59.5	58.0	56.4	56.7	55.5	53.7	50.6	50.1
Deaths from Diarrhœa	1	3	2	2	8	24	24	52	47	50	53	36	15	10	9	6	5	1	3

1907.

	WEEK ENDING																		
	July 6	July 13	July 20	July 27	Aug. 3	Aug. 10	Aug. 17	Aug. 24	Aug. 31	Sept. 7	Sept. 14	Sept. 21	Sept. 28	Oct. 5	Oct. 12	Oct. 19	Oct. 26	Nov. 2	Nov. 9
Rainfall ..	0.54	0.61	0.00	0.62	1.24	0.40	1.36	0.15	0.02	0.73	0.00	0.01	0.03	0.17	1.10	1.44	0.44	0.50	0.24
Earth Temperature 1 ft. below surface ..	53.6	55.0	60.9	58.7	59.2	60.0	59.5	57.1	58.1	56.1	56.9	56.5	54.4	54.6	52.2	51.1	48.2	47.4	48.1
Earth Temperature 4 ft. below surface ..	53.9	54.1	55.1	56.4	56.9	57.4	58.0	57.8	57.4	57.4	57.1	57.0	56.5	56.1	55.5	53.9	52.8	51.2	50.8
Deaths from Diarrhœa	..	1	..	2	..	..	2	2	8	6	6	9	19	22	19	12	7	6	4

1908.

	WEEK ENDING																		
	July 4	July 11	July 18	July 25	Aug. 1	Aug. 8	Aug. 15	Aug. 22	Aug. 29	Sept. 5	Sept. 12	Sept. 19	Sept. 26	Oct. 3	Oct. 10	Oct. 17	Oct. 24	Oct. 31	Nov. 7
Rainfall ..	0.17	1.27	1.66	0.00	0.05	0.01	0.22	0.85	1.44	1.02	0.15	0.58	0.31	0.02	0.02	0.07	0.48	0.25	0.00
Earth Temperature 1 ft. below surface ..	62.3	60.0	59.9	62.3	63.4	61.9	59.0	58.0	57.1	53.1	53.2	52.9	56.3	58.5	56.8	54.7	52.1	48.9	47.0
Earth Temperature 4 ft. below surface ..	56.4	57.4	53.0	57.9	59.6	60.3	60.0	58.6	58.1	57.1	55.8	54.6	55.4	56.0	57.1	56.2	55.7	53.2	52.2
Deaths from Diarrhœa	2	4	3	2	3	8	12	19	13	9	8	4	8	8	9	9	6	4	4

NOTIFIABLE INFECTIOUS DISEASES.

Notified Cases and Deaths in Age-periods.

1902.

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Scarlet Fever <i>Cases</i> ..	5	290	517	122	30	1	1	..	..	..	966
<i>Deaths</i> ..	1	12	7	1	1	1	..	..	..	..	23
Diphtheria <i>Cases</i> ..	4	52	99	28	16	7	3	..	..	..	209
<i>Deaths</i> ..	4	19	7	1	..	..	..	..	..	..	31
Enteric Fever <i>Cases</i> ..	1	19	100	87	85	41	23	15	4	..	375
<i>Deaths</i>..	..	2	10	8	17	6	4	2	1	..	50

1903.

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Small-Pox <i>Cases</i> ..	1	6	19	24	55	27	14	3	3	..	152
<i>Deaths</i>..	..	1	..	..	1	..	..	..	..	..	2
Scarlet Fever <i>Cases</i> ..	19	361	703	263	56	14	3	..	..	..	1419
<i>Deaths</i> ..	1	14	13	6	..	..	..	..	..	..	34
Diphtheria <i>Cases</i> ..	2	100	225	68	21	6	3	..	1	1	427
<i>Deaths</i> ..	1	24	34	1	..	..	..	..	..	..	60
Enteric Fever <i>Cases</i>..	..	10	57	62	44	18	5	3	1	..	200
<i>Deaths</i>..	..	1	10	7	9	5	2	1	1	..	36

1904.

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Small-Pox <i>Cases</i> ..	12	11	57	69	81	45	21	11	1	..	308
<i>Deaths</i> ..	4	1	2	..	1	1	1	..	..	..	10
Scarlet Fever <i>Cases</i> ..	9	336	647	140	39	12	2	2	..	..	1187
<i>Deaths</i>..	..	10	17	1	1	..	..	..	..	..	29
Diphtheria <i>Cases</i> ..	9	147	299	56	23	10	3	1	..	..	548
<i>Deaths</i> ..	8	23	35	1	2	..	..	..	..	..	69
Enteric Fever <i>Cases</i> ..	1	30	72	74	60	30	21	4	3	1	296
<i>Deaths</i> ..	1	3	6	16	12	8	6	3	2	..	57

NOTIFIABLE INFECTIOUS DISEASES.

Notified Cases and Deaths in Age-periods.
1905.

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Small-Pox <i>Cases</i>..	..	..	1	7	4	1	3	2	1	..	19
<i>Deaths</i>..	..	..	..	..	..	..	1	..	..	..	1
Scarlet Fever <i>Cases</i> ..	8	211	343	85	26	8	..	..	..	..	681
<i>Deaths</i> ..	2	11	6	..	..	..	..	..	..	..	19
Diphtheria <i>Cases</i> ..	5	149	266	68	28	10	8	2	1	..	537
<i>Deaths</i> ..	1	31	15	..	..	..	2	..	..	..	49
Enteric Fever <i>Cases</i> ..	2	28	78	66	35	29	13	3	1	..	255
<i>Deaths</i> ..	1	1	3	6	2	8	1	1	1	..	24
Puerperal Fever (Notified) <i>Cases</i>..	..	..	..	..	..	..	..	..	..	..	12
<i>Deaths</i>..	..	..	..	..	..	..	..	..	..	..	12
Erysipelas <i>Cases</i>..	..	..	..	..	..	..	..	..	..	..	110
<i>Deaths</i>..	..	..	..	..	..	..	..	..	..	..	11

1906.

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Scarlet Fever <i>Cases</i> ..	6	187	335	56	21	6	..	..	..	..	611
<i>Deaths</i> ..	1	9	6	1	..	..	..	..	..	..	17
Diphtheria <i>Cases</i> ..	11	136	300	73	32	11	5	1	1	..	570
<i>Deaths</i> ..	3	23	14	..	1	..	..	..	..	..	41
Enteric Fever <i>Cases</i> ..	1	15	94	71	59	26	16	3	..	..	285
<i>Deaths</i>..	..	1	8	9	12	4	5	1	..	..	40
Puerperal Fever (Notified) <i>Cases</i>..	..	..	..	5	9	1	..	..	..	..	15
<i>Deaths</i>..	..	..	..	6	13	..	..	..	..	..	19
Erysipelas <i>Cases</i> ..	9	8	6	23	44	37	34	29	18	12	220
<i>Deaths</i> ..	3	..	..	..	1	1	2	1	1	1	10

1907.

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Scarlet Fever <i>Cases</i> ..	4	127	238	26	17	4	..	..	..	..	416
<i>Deaths</i>..	..	4	..	..	1	..	..	..	..	..	5
Diphtheria <i>Cases</i> ..	5	125	285	62	32	6	..	1	1	..	517
<i>Deaths</i> ..	2	28	11	..	..	1	..	..	..	..	42
Enteric Fever <i>Cases</i> ..	1	16	53	68	49	22	16	6	..	..	231
<i>Deaths</i> ..	1	2	7	9	11	2	3	2	..	..	37
Puerperal Fever (Notified) <i>Cases</i>..	..	..	..	3	11	3	1	..	..	..	18
<i>Deaths</i>..	..	..	..	3	11	5	..	..	..	..	19
Erysipelas <i>Cases</i> ..	5	6	13	21	27	41	60	28	28	12	241
<i>Deaths</i> ..	3	..	..	..	1	3	5	2	3	4	21

NOTIFIABLE INFECTIOUS DISEASES.

Notified Cases and Deaths in Age-periods, distinguishing Male and Female Cases.

	0-1 year.	1-5 years.	5-15 years.	15-25 years.	25-35 years.	35-45 years.	45-55 years.	55-65 years.	65-75 years.	Over 75 yrs.	Total.
Scarlet Fever ..	2	57	167	19	4	1	1	..	..	..	251 } 595 344 }
	3	73	217	26	21	4	..	..	..	..
..	..	3	2	..	..	..	..	..	..	..	5 } 11 6 }
	..	2	3	..	1	..	..	..	..	..
Diphtheria ..	4	61	109	23	6	..	2	2	..	..	207 } 454 247 }
	2	37	146	37	12	10	2	..	1	..	
..	2	6	7	..	..	..	..	..	..	..	15 } 30 15 }
	..	5	8	2	..	..	..	..	..	..
Enteric Fever ..	..	7	32	34	21	14	13	3	..	..	124 } 237 113 }
	..	6	42	32	20	9	3	1	..	..
..	..	..	3	3	2	6	2	1	..	..	17 } 29 12 }
	..	..	7	1	3	1	..	..	..	..
Erysipelas ..	..	4	3	5	16	15	21	13	5	1	83 } 211 128 }
	2	3	14	14	13	19	31	12	14	6	
..	..	..	..	..	..	1	1	1	3	..	6 } 8 2 }
	..	1	..	..	..	..	..	..	..	1	
Puerperal Sepsis ..	..	..	..	3	9	4	..	..	..	..	16 } 9 }
	..	..	..	1	5	3	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	F. } F. }
	

Nottingham. Notification and other Epidemic Disease Data up to the end of 1908.

	SCARLET FEVER. *				ENTERIC FEVER. †			SMALL-POX. *			DIPHTHERIA. †			PUERPERAL FEVER. §			ERYSIPELAS. §			Deaths from Non-Notifiable Epidemic Diseases.			
	Deaths.	Known cases.	Ratio of known cases to Deaths.		Deaths.	Known cases.	Ratio.	Deaths.	Known cases.	Ratio.	Deaths.	Known cases.	Ratio.	Deaths.	Known cases.	Ratio.	Deaths.	Known cases.	Ratio.	Measles.	Whooping Cough.	Diarrhoea.	TOTAL.
1881	353	..	..	4	61	..	..	..	..	..	7	..	..	..	..	..	..	..	..	34	88	202	324
1882	280	1029	3·7	51	71	68	1·0	51	446	8·7	21	..	..	..	..	..	..	..	..	133	73	225	431
1883	59	428	7·3	2	73	159	2·2	2	23	11·5	34	125	3·7	..	..	..	..	..	..	14	76	168	258
1884	37	384	10·4	..	68	218	3·2	..	11	..	39	113	2·9	..	..	..	..	..	..	145	129	377	651
1885	31	390	12·6	2	44	326	7·4	2	10	5·0	28	85	3·0	..	..	..	..	..	..	112	116	163	391
1886	13	351	27·0	2	61	317	5·2	2	12	6·0	10	68	6·8	..	..	..	..	..	..	175	90	328	593
1887	22	615	28·0	..	74	411	5·6	..	2	..	10	50	5·0	..	..	..	..	..	..	58	153	315	526
1888	25	643	25·7	12	89	426	4·8	12	59	4·9	34	152	4·5	..	..	..	..	..	..	115	81	157	353
1889	32	1047	32·7	..	66	395	5·9	..	..	..	11	66	6·0	..	..	..	..	..	..	86	153	263	502
1890	33	984	29·8	..	58	348	6·0	..	..	..	16	64	4·0	..	..	..	..	..	..	52	47	185	284
1891	28	895	31·9	..	70	396	5·6	..	..	..	21	103	4·9	..	..	..	..	..	..	110	121	180	411
1892	43	1163	27·0	..	36	205	5·6	..	..	..	30	76	2·5	..	..	..	..	..	..	118	117	158	393
1893	82	1511	18·4	5	68	490	7·2	5	53	10·6	15	81	5·4	..	..	..	..	..	..	25	59	358	442
1894	51	1164	22·8	4	62	363	5·8	4	59	15·8	18	56	3·1	..	..	..	..	..	..	134	118	134	386
1895	51	1250	24·5	..	55	461	8·3	..	3	..	11	47	4·2	..	..	..	..	..	..	1	33	444	478
1896	27	731	27·1	..	75	478	6·4	..	..	..	12	60	5·0	..	..	..	..	..	..	203	91	175	469
1897	34	517	15·2	..	45	428	9·5	..	..	..	21	75	3·6	..	..	..	..	..	..	49	117	530	696
1898	32	931	29·1	..	54	423	7·8	..	..	..	23	85	3·7	..	..	..	..	..	..	104	59	385	548
1899	53	2500	47·2	..	114	613	5·4	..	..	..	30	142	4·7	..	..	..	..	..	..	140	54	600	792
1900	55	1394	25·3	..	75	505	6·7	..	..	..	28	116	4·1	..	..	..	..	..	..	45	103	387	535
1901	11	918	83·5	..	79	535	6·8	..	7	..	29	115	3·97	..	..	..	..	..	..	96	96	361	553
1902	23	966	42·0	..	50	375	7·5	..	..	..	31	209	6·74	..	..	..	..	..	..	4	37	194	235
1903	34	1420	41·8	2	36	200	5·6	2	152	76·0	60	423	7·05	..	..	..	..	..	..	98	92	166	356
1904	27	1189	44·0	10	58	296	5·1	10	308	30·8	71	546	7·7	..	..	..	..	..	..	44	89	344	477
1905	19	681	35·8	1	24	255	10·6	1	19	19·0	49	537	10·9	..	..	..	11	110	10·0	232	61	202	495
1906	17	611	35·9	..	40	285	7·1	..	..	..	41	570	13·9	..	..	..	10	220	22·0	5	40	375	420
1907	5	416	83·2	..	37	231	6·2	..	..	..	42	517	12·3	..	..	..	21	241	11·5	203	131	155	489
1908	11	595	54·1	..	29	237	8·2	..	..	..	30	454	15·1	..	..	..	8	211	26·4	31	64	171	266

* Notification of Small-Pox and Scarlet Fever, from February, 1882. † Notification of Enteric Fever and Typhus, from June, 1883.

† Notification of Diphtheria, from August, 1885.

§ Notification of Puerperal Fever and Erysipelas from 1905.

OTHER DISEASES, INFECTIVE AND NON-INFECTIVE, AND DEATH CAUSES.

This section of the Report contains matters of special interest gathered from the general table of deaths of Nottingham people during 1908 (Table III., pp. 8 to 16 ante) arranged according to sex and in age-periods.

Many specific infective diseases are dealt with in this section, in addition to those included under the heading of epidemic diseases in that immediately preceding it; but though communicable and propagated by a specific virus, the infective diseases now remaining to be discussed, do not for the most part extend in an epidemic or endemic manner. Moreover, in order to allow of a ready comparison between past and present records in the Annual Reports, it is desirable to retain, as far as practicable, the same arrangement of parts throughout as hitherto adopted.

The deaths ascribed to **Syphilis**, 12 in number (8 of males and 4 of females—11 due to the inherited form of the complaint) were, as usual, much too few to constitute a true measure of the prevalence and fatality of this horrible disease, and in the case of **Gonorrhœa** we have at length the *reductio ad absurdum* of a total disappearance of declared mortality. One of our leading text-books contains the following passage on the subject of gonorrhœa:—"One of the most widespread and serious of infectious diseases, it presents many features for consideration. As a cause of ill-health and disability, the gonococcus occupies a position of the very first rank among its fellows. While the local lesion is often thought to be trifling, in its singular obstinancy, in the

possibilities of permanent sexual damage to the individual himself, and still more in the grisly troop which may follow in its train, gonorrhœal infection does not fall far short of syphilis in importance."

The fact that no death was certified as due to this malady, affords another striking illustration of the unreliability of death returns in the case of those diseases to which a moral stigma attaches.

Erysipelas, Puerperal Septicæmia, Septic Intoxication, and Septicæmia (including **Pyæmia**).—The deaths attributed to these infective diseases during 1908 were, respectively, 8, 9, and 17 in number, as compared with 21, 19, and 14 in 1907; 10, 19, and 22 in 1906; and 11, 12, and 18 in 1905. The tendency to an increase apparent in the figures for 1907 and 1906 has therefore disappeared. Both erysipelas and puerperal septicæmia are now compulsorily notifiable diseases, and I am glad to observe that cases of puerperal sepsis are now more regularly reported than they were at the outset. In previous years fatal cases only, for the most part, came to my notice. All the cases occurring in the practice of midwives are now, I believe, regularly notified; and each midwife in whose practice a case occurs is suspended until her clothes, outfit, and person have been thoroughly cleansed and disinfected.

Six of the deaths from erysipelas were of males, and two of females; all but one (f.) occurred after the 40th year.

All of the 9 deaths from puerperal sepsis occurred between the 25th and 45th years.

Of the deaths from pyæmia, 4 (2 of each sex) occurred during the first year of life. Of the 13 other cases, all but two occurred after the 35th year—7 of males and 6 of females.

Acute Rheumatism and Rheumatism of the Heart.—The number of deaths registered as due to these diseases was 23—10 of males and 13 of females. The average total of the five previous years was 16. Fifteen deaths, 7 of males and 8 of females, occurred before the 20th year. According to Dr. John Tatham, the maximum mortality from acute and sub-acute rheumatism in both sexes occurs between the 10th and 20th year.

Phthisis and other Tuberculous Diseases.—The deaths attributed to various forms of tuberculous disease in Nottingham during 1908 were 449 in number, the male deaths numbering 272, and the female 177. The corresponding totals for both sexes in each of the preceding five years were, respectively, 458, 416, 410, 472, and 414. The average annual number of such deaths during the ten years ended with 1902 was 435. The highest annual total during the period of 16 years covered by these figures was 481 in 1900, and the lowest 401 in 1899.

The 449 deaths from tuberculous diseases during 1908 were equal to 11·2 per cent. of all deaths in that year. The corresponding proportion for England and Wales as a whole during 1908 was 10·7 per cent. The deaths below the fifth year were both actually and relatively less numerous than usual. The total number of such deaths was 77, and they were equal to 15 per cent. of all deaths from tuberculosis. The corresponding proportion in the three immediately preceding years were, respectively, 21 per cent., 18 per cent., and 21 per cent.

The difference, in favour of females, between the mortality of the two sexes from tuberculous diseases is exceedingly well marked. The deaths of males below the fifth year numbered 46, and those of females 31.

The same difference in mortality at this period, though in a lesser degree, is recorded for the country as a whole. This probably indicates an intrinsic difference, and not one which is the result of environment. Between the fifth and twenty-fifth year, the mortality was, as usual at this age period, higher among females than males; the deaths of males numbered 41, and those of females 46. The deaths in this group (5–25 years) were equal to 20 per cent. of all, as compared with 19 per cent. during 1907, 20 per cent. in 1906, and 21 per cent. in 1905.

In the period between the twenty-fifth and fifty-fifth year, there is a continually increasing difference to the advantage of females; the deaths of males at this time of life were 141 in number, and those of females 85. From this period onwards, also, the same difference continues, and in an increasing degree. The deaths of males from the fifty-fifth year upwards numbered 44, and those of females 15. The proportion of deaths from tubercle at this period of life to the total number of deaths from the disease is more variable than at other age-periods. These 226 deaths correspond to 53 per cent. of all—as against 40 per cent., 53 per cent., and 50 per cent. in the three preceding years, respectively.

The following is a list of cases of each sex in age-periods, classified, as far as practicable, according to the parts or organs of the body attacked:—

Tuberculosis of brain: 52 deaths (32 m., 20 f.); 15 (11 m., 4f.) under 1 year, 27 (15 m., 12 f.) between 1 and 5 years, 5 (3 m., 2 f.) between 5 and 10 years, 2 (f.) between 10 and 15 years, 1 (m.) between 15 and 20 years, 1 (m.) between 35 and 45 years, and 1 (m.) between 55 and 65 years.

Tuberculosis of larynx: 5 deaths—all of males; 1 between 35 and 45 years, 3 between 45 and 55 years, and 1 between 65 and 75 years.

Tuberculosis of lungs (Tuberculous phthisis): 335 deaths (203 m., 132 f.); 1 (m.) under 1 year, 7 (4 m., 3 f.) between 1 and 5 years, 6 (2 m., 4 f.) between 5 and 10 years, 3 (f.) between 10 and 15 years, 16 (8 m., 8 f.) between 15 and 20 years, 33 (16 m., 17 f.) between 20 and 25 years, 83 (49 m., 34 f.) between 25 and 35 years, 74 (45 m., 29 f.) between 35 and 45 years, 58 (38 m., 20 f.) between 45 and 55 years, 40 (29 m., 11 f.) between 55 and 65 years, 13 (11 m., 2 f.) between 65 and 75 years, and 1 (f.) between 75 and 85 years.

Tuberculosis of abdomen: 32 deaths (18 m., 14 f.); 7 (4 m., 3 f.) under 1 year, 10 (6 m., 4 f.) between 1 and 5 years, 6 (3 m., 3 f.) between 5 and 10 years, 2 (1 m., 1 f.) between 10 and 15 years, 2 (1 m., 1 f.) between 15 and 20 years, 1 (f.) between 20 and 25 years, 1 (m.) between 25 and 35 years, 1 (f.) between 45 and 55 years, and 2 (m.) between 55 and 65 years.

Tuberculosis of joints: 3 deaths (1 m., 2 f.); 1 (m.) between 15 and 20 years, 2 (f.) between 20 and 25 years.

Tuberculosis of spine: 2 deaths (m.); 1 between 5 and 10 years, and 1 between 35 and 45 years.

General tuberculosis: 16 deaths (9 m., 7 f.); 5 (4 m., 1 f.) under 1 year, 4 (1 m., 3 f.) between 1 and 5 years, 3 (2 m., 1 f.) between 5 and 10 years, 1 (f.) between 10 and 15 years, 1 (m.) between 35 and 45 years, and 2 (1 m., 1 f.) between 45 and 55 years.

Other forms of tuberculosis: 4 deaths (2 m., 2 f.); 1 (f.) between 1 and 5 years, 1 (m.) between 5 and 10 years, 1 (m.) between 10 and 15 years, and 1 (f.) between 55 and 65 years.

The deaths in both sexes from all tuberculous diseases in Nottingham during 1908, 449 in number, correspond to a death-rate of 1.72 per 1,000 living (172

per 100,000). The deaths from phthisis alone (335) were equal to a rate of 1·34 per 1,000 (134 per 100,000). The corresponding rates for 1907 were 1·72 and 1·29 respectively.

The death-rates of each sex per 1,000 living of each during 1908, were; of males from all tuberculous diseases 2·24, and of females 1·27; of males from phthisis alone, 1·78, and of females 0·95. The above sexual rates for all tuberculous diseases are both slightly lower, and those for phthisis alone slightly higher than the corresponding figures of 1907. The death-rates of males and females from all tuberculous diseases, and from phthisis, in England and Wales as a whole during 1907—the latest available—were as follows:—From all tuberculous diseases, males 1·80, females 1·36; from phthisis alone, males 1·34, females 0·95. From these figures it will be seen that the death-rate of males from all tuberculous diseases is very considerably higher in Nottingham than in the country as a whole, while the death-rate of females is lower; and further, that the death-rate of males from phthisis alone is much higher in Nottingham than in England and Wales, while the local death-rate of females is identical with that of the country at large—for females.

The difference between the death-rates from all tuberculous diseases of males and females, respectively, who are industrially employed in Nottingham is even greater than that shown by the foregoing statistics for the general population. The death-rate of males so employed is some 0·17 per 1,000 higher, and that of females 0·31 lower than the corresponding rate for the general population.

While it is generally understood that in the war against tuberculosis, the principal field of operations lies among the dwellings of the poor, both in town and country, this fact is better realized with the aid of actual

statistics shewing the incidence of the disease upon houses of various classes than when opinions on the subject have to be formed from general impressions. The accompanying table giving the numbers of deaths from phthisis (in Nottingham during the past two years) in houses of various rentals, from the poorest upwards, localizes the mischief very definitely in a social sense.

NOTTINGHAM.

Deaths from tuberculous phthisis in houses of various rentals.

RENTAL OF HOUSE.	No. of Deaths.	
	1907.	1908.
2/- to 3/- per week (gross rental)	11	17
3/- to 4/- " " " " " "	66	64
4/- to 5/- " " " " " "	72	79
5/- to 6/- " " " " " "	102	101
6/- to 7/- " " " " " "	41	41
7/- to 8/- " " " " " "	16	14
8/- to 9/- " " " " " "	14	8
9/- to 10/- " " " " " "	4	4
Above 10/- " " " " " "	5	7

N.B.—Deaths from phthisis in the Union Workhouse, and other Public Institutions, have been re-distributed (in this table) to the class of house from which the patients were originally removed. The majority of better-class patients die at home.

Having advocated the notification of phthisis for the past 10 years, and already secured some measure of voluntary notification in this City, I am pleased to record the issue by the Local Government Board of the Public Health (Tuberculosis) Regulations, 1908, to provide for the notification to Medical Officers of Health of Sanitary Authorities of cases of pulmonary tuberculosis occurring among the inmates of Poor Law Institutions,

or among persons under the care of District Medical Officers, and for the taking of certain measures in such cases. This order came into force in January 1909, and has already been instrumental in bringing to my notice many cases in which advice and assistance as regards treatment for the patient, and precautions against the spread of infection could advantageously be given and taken. The preamble of the order and the circular letter which accompanied it, are reproduced in the Appendix of this Report. I may also repeat that this order forms the subject of a special report submitted by myself for your consideration.

In February of the current year, also, a highly instructive and suggestive memorandum written by Dr. Arthur Newsholme, Chief Medical Officer to the Local Government Board, was issued, setting out appropriate action to be taken by Local Authorities under the powers conferred by the order.

No scheme for combating phthisis can achieve any considerable measure of success which does not include a sanatorium, in which the sufferers and their friends can learn, and the public can see illustrated, the correct principles of treatment, both curative and precautionary, to be adopted in order to deal effectively with this dread malady.

Such a sanatorium is already established in Nottingham, and in concluding this article I cannot, I think, do better than quote a passage from a former report dealing with the subject, and descriptive of the aims and scope of such an institution, and the accessory provisions and measures necessary to complete its usefulness. This passage is as follows:—

“This Sanatorium is, at once, therefore, a school and a hospital. A few phthisical patients have been admitted to hospital occasionally in the past for instruction and treatment, but it was not until October of 1907 that the Town Council decided to authorize the use

of certain buildings on the Bagthorpe enclosure for the exclusive accommodation of phthisical patients. A uniform charge of 10/6 per week is made for each patient at the Sanatorium, but, notwithstanding this, the place has been practically full from the outset, and its popularity is continually increasing. A hospital of this kind, especially when associated with a phthisis dispensary, constitutes the best possible means of diffusing useful information concerning the disease and its treatment among the working classes; but without notification it is impossible to discover more than a very small fraction of all the cases requiring aid, and for this reason, therefore, I venture once more to urge its adoption."

An account of the work done in the institution during 1908 will be found in the Hospital section of this Report.

The visitation of affected households, the issue of leaflet literature, and the disinfection of goods and premises are dealt with under appropriate headings.

Acute and Chronic Alcoholism were certified as death causes in only 13 cases, all between 35th and 65th year of age. Three of the acute cases were of males, and 1 only of a female; of the chronic cases, 4 were of males, and 5 of females. These numbers of deaths obviously represent only a small fraction of the total mortality from excessive indulgence in alcohol. The annual average of deaths so certified during the past 5 years has been 22.

Cirrhosis of the Liver in the adult, is still held by the majority of medical men, notwithstanding recent statements to the contrary, to be mostly due to alcoholic indulgence. The deaths ascribed to this condition were 27 in number during 1908, and the average annual number of the preceding 5 years was 35. Thirteen of the deaths recorded during 1908 were of women, and 12 of men. These numbers, again, are certainly far below the actual totals, so that it is out of

the question to base any general argument upon them, but we may note in passing the suggestive fact that 27 out of 43 total deaths from this cause in 1907, and 13 out of 25 in 1908 were those of females.

Cancer and other Malignant New Growths.—The number of deaths referred to malignant new growths during 1908 was 254. The corresponding totals during the preceding five years were, respectively, 220, 223, 212, 192 and 223. The average annual number during the 10 years 1888–97 was 168, and during the next decennial period (1898–1907), 211.

Of the 254 deaths from malignant new growths during 1908, 222 were due to epithelial cancer, and 32 to sarcoma. Seventy-two of the deaths from true cancer were of males, and 150 of females. The deaths of males constitute 32 per cent. of all, and those of females 68 per cent. The death-rate of males per 1,000 living of that sex was equal to 0·60 per 1,000 (60 per 100,000), and the death-rate of females to 1·09 per 1,000 (109 per 100,000).

It must not be forgotten, however, that true cancer is principally a disease of middle and advanced age, and that the above population figures are for the whole community. One hundred and ninety-nine out of a total of 222 deaths from true cancer, or 90 per cent., occurred between the 35th and the 75th year. The preponderance of the female over the male mortality at certain periods between these age limits was exceptionally striking. Between the 35th and 45th year there were 6 male deaths, and 24 female; between the 45th and 55th year there were 20 male deaths and 38 female; between the 55th and 65th year there were 14 male deaths and 41 female; and between the 65th and 75th year there were 22 male deaths and 34 female.

The deaths of males exceeded those of females from the sarcomatous variety of malignant new growths. Of

the 32 deaths from these, 19 were of males and 13 of females. The earliest age-period in which a death from sarcoma occurred was the 5 to 10 years period, and the latest the 75 to 85 years period, but, excepting only that between 10–15 years of age, the deaths were distributed over the whole group of age-periods intervening between these extreme limits.

If now we group the fatal cancerous and sarcomatous cases together, and estimate the sexual death-rates of the combined totals, we obtain a rate of 0·75 per 1,000 living males (75 per 100,000) for males, and 1·17 per 1,000 living females (117 per 100,000) for females. The corresponding crude rates for England and Wales during 1907—the latest available—were 0·78 (78 per 100,000) for males, and 1·03 (103 per 100,000) for females.

In view of the interest which the subject of cancer naturally excites in every thoughtful mind, it may be useful to clear the air in some measure by recording certain opinions and facts recently brought to light, or emphasized, by statistical and biological investigators of the first rank. Dr. John Tatham, late Superintendent of Statistics at the General Register Office, Somerset House, has shewn that the recorded mortality from malignant disease continues steadily to increase in both sexes, but with greater rapidity among males than among females. The extraordinary difference (in favour of men) in the mortality of the two sexes from cancer of the generative organs completely explains the higher mortality of females.

Dr. G. F. Bashford, Director of the Imperial Cancer Research Laboratory, in discussing, at the Royal Society of Medicine in November, 1908, the question whether cancer is, or is not, in any sense hereditary, expresses himself as follows :—

“Thus far there is no evidence that the liability to carcinoma has been enhanced by systematic in-breeding. I do not wish to

anticipate the results of our observations, which are still continuing, but we have not as yet obtained even an indication that cancer is inherited. It appears to be very doubtful whether there is transmitted even a power of acquiring the cancerous modification under excitation, and it is not impossible that cancer may be really a late modification of healthy tissue acquired *de novo* for each individual, and in which the bogey of inherited predisposition—the dying echo of ancient constitutional conceptions of cancer as a blood-disease—plays no part whatsoever.”

Diabetes Mellitus —In former reports I have drawn attention to a somewhat fluctuating increase in the number of deaths certified as due to this disease, which has become apparent in recent years. The number of such deaths during 1908 was 35, 19 of males and 16 of females. The total number in 1907 was 26, 14 of males and 12 of females. The annual averages of deaths in both sexes for the two consecutive five-yearly periods immediately antecedent to 1907 were, respectively, 28 and 18. A similar increase in the country as a whole has been recorded in recent reports of the Registrar-General. The majority of the deaths occur from middle age, onwards. In Nottingham 77 per cent. of all the deaths were distributed in a fairly even manner over the period of life intervening between the 45th year and extreme old age (85th year). In England and Wales during 1907 the proportion of all the deaths from diabetes which occurred after the 45th year was 72 per cent. It seems not at all improbable that the direct and indirect injury to the central nervous system, occasioned by many of the conditions and accessories of modern life in civilized communities, may explain the increase in the number of deaths attributed to diabetes.

Premature Birth.—The deaths referred to this cause, the majority of which occur within a few days of birth, were 186 in number. Of this total, 101 were those of males, and 85 of females. The sexual ratio of such deaths in England and Wales during 1907 was

approximately as 102 (males) to 80 (females). The total number of deaths certified as due to premature birth in Nottingham during 1907 was 178, and the average annual number for the ten years ending with 1906 was 146. The apparent increase in recent years is larger than can be explained by the increase of population.

Congenital Defects, Lung Collapse, and Debility at Birth.—It is necessary to group together the deaths referred to these several causes from year to year, in order to obtain aggregate totals which shall be at all evenly comparable. The total number of such deaths during 1908 was 129, as compared with 132 during 1907, and an annual average of 147 for the five years ending with 1906.

Want of Breast Milk, Atrophy, Debility, and Marasmus.—These alleged death causes, like the last, are better taken together than separately, because of their liability to be used more or less synonymously by certain practitioners. There were 99 deaths under five years certified as due to one or other of these causes during 1908, as against 120 in 1907, and an annual average of 126 for the five years ending with 1906. It is, of course, a well recognized fact that want of breast milk is the direct or indirect cause of a host of infantile ailments and deaths—in addition to indigestion, bowel catarrh, and diarrhœa. Of the 99 deaths under these headings during 1908, 91 were under one year, and, of these, 47 were of males and 44 of females.

Illegitimate children constitute a large proportion of the victims under these headings. The death-rate of these unfortunates—when large numbers are dealt with—is nearly double that of their legitimate fellows.

Rickets.—The deaths registered as due to this disease numbered 4 only during 1908, as compared with nine in 1907, an annual average of 13 for the five years ending with 1906, and of 25 for the preceding five years (1897–1901).

The statistics of this disease in the country as a whole give us but little assistance in deciding whether the striking decline in the mortality attributed to this disease in Nottingham is real or only apparent. Judging, however, by my own observations in this City, and by my knowledge of other places where the disease is still prevalent, I am strongly disposed to think that this local decline is a real one. There are certain advantages which even the most squalid of our slum neighbourhoods of small individual houses possess over those made up of tenemented blocks and flats; there are more fresh air and sunlight and facilities for physical exercise immediately available for their denizens, than is the case with even the most favoured of the dwellers in flats. These advantages, I believe, together with the steady, though slow improvement in the general conditions of life among the working classes which has recently taken place and is still going on, have had the effect of diminishing our death-rate from rickets.

With regard to scurvy-rickets, I have once more to record that, although I have kept a sharp look out for this disease among the now long list of middle-class children under my observation who are brought up by hand, upon sterilized new-milk, I have failed to detect any indication of it.

Old Age, Senile Decay.—The deaths attributed to simple old age were 154 in number, as against 187 in 1907, and an annual average of 241 during the five years ending with 1906. Of the 154 deaths so accounted for in 1908, 59 were of males and 95 of females. Twenty-seven (13 m. and 14 f.) were between 65 and 75 years of age, 91 (32 m. and 59 f.)

were from 75 to 85 years, and 36 (14 m. and 22 f.) were at more than 85 years of age. Of these last, 17 (5 m. and 12 f.) were between 90 and 100, and one female death was at 110.

I may, perhaps, be allowed once more to emphasize the fact that old age is a more or less relative matter for particular individuals, as distinguished from absolute duration of life; and that what we should aim at in certifying a death, even in advanced age, is to give the disease, if any, to which the death is primarily due, whether incidental to a period of physiological decline or independent of it. Old age as a death cause should be reserved for use in those cases where the death cannot be explained in any other way.

Infantile Convulsions.—The deaths given as due only to this symptom of disease during 1908 were 65 in number. The total for 1907 was 47, and the annual average for the five years ending with 1906 was 65. Of the deaths so certified during 1908, 42 were of males and 23 of females. There were 39 deaths of males and 14 of females under one year, and three of males and six of females between one and five years.

In the official volume on Nomenclature of Disease, issued by the Royal College of Physicians of London (3rd revision), the following passage occurs, having reference to the use of the term “convulsions” as a certified death cause: “This term being the name of a ‘symptom, should be used only when more precise ‘information is wanting. When the cause is known, ‘the return should be made under the head of that ‘cause.’”

Meningitis.—The annual number of deaths ascribed to simple meningitis, without mention of any infective ailment by which it is caused, has been shrinking more or less steadily for many years, but even if a

post-mortem examination could be made in every doubtful case, the diagnosis would not necessarily be cleared up in all; and as a large number of cases must remain in which this invaluable aid to diagnosis cannot be obtained, a considerable number of deaths will certainly continue to be explained by this insufficient term.

The number of deaths so returned in 1908 was 31 (18 m. and 13 f.), as against 32 in 1907, an annual average of 44 for the five years ending with 1906, and one of 65 for the preceding decennium, 1892–1901.

Sixty per cent. of all the deaths during 1908 occurred at ages below five years.

There was one death certified during 1908 as due to **Epidemic Cerebro-Spinal Meningitis** (m., two years), but the diagnosis in this case was not confirmed on bacterial examination.

Cerebral Hæmorrhage (Apoplexy, Hemiplegia, Disease of Blood Vessels).—Prior to 1901, Softening of the Brain was included with the above death causes in the table (No. 3) issued with all the larger health reports of this country. Since 1900, however, the deaths due to hæmorrhage from the arteries of the brain have been distinguished from those due to their obstruction, and I am now able, therefore, to give these deaths separately for 1908 and several past years.

The deaths from cerebral hæmorrhage during 1908 numbered 187, as against totals of 193, 179, 157, 173, 158, 204, and 173 in the preceding seven years respectively. Of the 187 deaths during 1908, 94 were of males and 93 of females. All but seven of the deaths (96 per cent.) were at ages above 45 years. Also, as usual elsewhere, about the middle period of life there was a marked preponderance of the female over the male mortality.

It should be noted, as I have stated in previous annual reports, that a certain amount of reciprocal variation must be looked for between deaths recorded under these headings, and those ascribed to primary diseased conditions of such organs as the heart and kidneys, to which the cerebral hæmorrhage may stand in a secondary relation.

General Paralysis of the Insane, and other Forms of Insanity.—The deaths attributed to General Paralysis of the Insane were 21 in number during 1908, as compared with 30 in 1907, and an annual average of 26 for the five years ending with 1906. The excess of the male over the female mortality from general paralysis of the insane is very striking. There was one death, that of a male, in the 25–35 years age-period; nine male, but no female deaths, between 35 and 45 years; six male and two female deaths between 45 and 55 years; one male death between 65 and 75 years; and two female deaths between 75 and 85 years.

The mortality with regard both to sex and age incidence here recorded—small as the figures are—is quite in agreement with the usual rule for this complaint. Of deaths described as due to other forms of insanity there is little to be said. There were five of these, all of females—one in the 5–10 years age-period, the others between 65 and 85 years. The number of these deaths in 1907 was nine, and the average number for the preceding five years, 14.

Epilepsy.—The deaths given as due to epilepsy in 1908 were 24 in number. The total for 1907 was 14, the average of the five years ending with 1906 was 23, and that of the preceding quinquennium, 17. The number of such deaths has fluctuated considerably in Nottingham of late years, but there is no definite

indication that the disease is declining here, although it certainly appears to be diminishing in the country as a whole. The 24 deaths which occurred in Nottingham during 1908 were distributed over all the usual age-periods from the 1–5 years up to the 55–65 years period, and the aggregate sexual incidence was exactly equal—with 12 deaths to each sex.

Locomotor Ataxy, Progressive Muscular Atrophy, Disseminated Sclerosis, &c.

—The deaths referred to these diseases during 1908 when grouped together amounted to 19, as against 15 in 1907; 17, 18, 18, 17, and 16, respectively, in the preceding five years; and an annual average of 19 for the quinquennium ending with 1901.

Locomotor ataxy, which stands first on the list, is probably the first also in popular consideration. This disease is stated by Dr. John Tatham to be slowly but steadily increasing in England and Wales. The commonest special cause of locomotor ataxy is syphilis. All the deaths ascribed to this complaint and the paraplegias during 1908, 12 in number, occurred after the 35th year, and were equally divided between the sexes, but locomotor ataxy commonly attacks males to a much greater extent than females.

Neuritis, Poly- and Peripheral Neuritis.

There were seven deaths referred to neuritis during 1908, as against 10, 4, and 3, respectively, in the 3 preceding years. The majority of its victims are adult women—6 out of a total of 7 in 1908 were women over 35 years—and alcoholic intemperance is a very frequent cause of the disease. In the Registrar-General's Reports, whenever "neuritis appears in the medical certificate in conjunction with alcoholism as a cause of death, the entry is made under intemperance" alone.

Organic Diseases of the Heart and Blood Vessels.—I have once more adopted the time-honoured but somewhat questionable plan, of grouping together the deaths from all organic disease or damage of the heart and blood vessels, without reference to the particular cause or causes of each disease or damaged condition. This method, it may be noted, has the advantage of securing a record of broad facts comparable with those of the past, and of obviating the risk of drawing conclusions from what may be mere accidental variations of certification. As bearing upon this last source of error, I may point out that valvular heart disease is apparently year by year increasing as a death cause, at the expense of other less definite forms of heart disease.

The deaths attributed to all the members of this group of diseases numbered 455 during 1908, 208 being those of males, and 247 of females. There were 234 deaths due to valvular heart disease, and 107 of these were of males, and 127 of females. During 1907 the total number of such deaths was 461, 204 of males, and 257 of females. The deaths from valvular heart disease in 1907 were 232 in number.

The average annual number of deaths from all the members of this group of diseases during the five years ending with 1906 was 378, and during the preceding quinquennium (1897–1901) was 374.

The deaths certified as due to cerebral hæmorrhage, a secondary result of primary vascular disease, have already been dealt with under their appropriate heading. A somewhat empirical classification in this instance is practically unavoidable.

Bronchitis, Pneumonia, and Pleurisy
(Diseases of the Respiratory System other than Phthisis).
—In a former Report (1907), when discussing the question

whether the above diseases should be included under one heading or split up, I wrote as follows (pp. 79, 80) :
 “ Apart altogether from the pathology of these diseases
 “ —varying as they do from acute specific affections in
 “ the pneumonias (Broncho-and Lobar pneumonia, and
 “ other forms), to degenerative catarrhal conditions in
 “ chronic bronchitis and emphysema—it is still con-
 “ venient to consider them together as affections of the
 “ same organs, having similar seasonal curves, not
 “ infrequently following each other in the same subject,
 “ and affected in their prevalence and fatality by the
 “ concurrence of similar acute specific maladies. As
 “ regards the last point, for example, epidemic influenza,
 “ measles, and whooping-cough, when prevalent, increase
 “ the liability to, and the mortality from, almost all
 “ respiratory disorders, acute and chronic, infective and
 “ degenerative.”

This passage explains, and, I think, justifies my action in keeping the group together for the present at any rate. The total number of deaths given as due to this group of diseases during 1908 was 759. The total for 1907 was 918, a figure increased by 201 above the average of the preceding five years, by the simultaneous prevalence of measles, whooping-cough, and influenza. The totals for each of the five immediately preceding years were, respectively, 722, 653, 732, 728, and 749; and the annual average for the five years ending with 1901 was 757. These figures show that in the absence of disturbing factors, like the exceptional prevalence of infective diseases specially liable to fatal lung complications, the aggregate annual totals of deaths from this somewhat heterogeneous group are comparatively uniform.

The deaths from bronchitis during 1908 were 402 in number, as against 504 in 1907, and an annual average of 363 for the preceding five years. These

deaths were made up of 249 from the acute variety, and 153 from the chronic form. Of the first, 113 were of males and 136 of females. One hundred of the deaths occurred in infancy, and all but four of the others after the 35th year of age. Of the second—the chronic form—65 were of males and 88 of females. None of these occurred before the 35th year, and 72 per cent. of all were after the 65th year of age.

The deaths from the pneumonias during 1908 amounted to 322, as compared with 389 in 1907, and an annual average of 323 for the preceding five years (1902–1906).

These deaths consisted of 133, 76 of males and 57 of females, from lobar pneumonia. Thirty-three per cent. of all these deaths occurred under five years of age, and 50 per cent. between 35 and 75 years of age. The deaths were evenly shared by males and females under the fifth year, but the male deaths greatly outnumbered the female from the 20th to the 65th year.

The pneumonia deaths were further made up of 189 deaths from lobular or broncho-pneumonia, sometimes called capillary bronchitis. These were almost equally divided between the sexes, 94 being deaths of males, and 95 of females. One hundred and fifty-one deaths, or 80 per cent. of all, occurred at ages under the fifth year. The male deaths predominated in the first year, the female between the first and fifth year.

All the varieties of pneumonia are infective in character.

The deaths ascribed to pleurisy were 12 in number. A considerable proportion of cases of pleurisy are tuberculous in their origin.

Ulcer of Stomach and Duodenum.—

The deaths referred to ulcer of the stomach and duodenum during 1908 were 18 in number, as against 26 in 1907, and 15, 14, 7, 23, and 17, in the five immediately preceding years.

The majority of the cases of gastric ulcer occur in women, usually about 60 per cent. of all, and most of the deaths from this complaint in women usually occur between the 15th and 30th years. Men are more commonly attacked from 45 years onwards. This rule of sexual incidence, however, has not lately always held good for Nottingham. For example, there were 10 deaths of males and 8 of females in 1908, and 14 and 12 respectively in 1907. Again, with regard to sex incidence in age-periods, the Nottingham figures for 1908 are by no means a striking example of the usual rule. There were 3 male and 4 female deaths between the 15th and 35th year—male deaths being relatively rare at this period; there were 5 male and 2 female deaths between the 35th and 65th year—this being fairly normal; and there were 2 deaths of each sex from the 65th to 85th year—female deaths from this affection being comparatively uncommon in advanced life.

(Simple) Enteritis.—There were 67 deaths certified from this complaint, as distinguished from the epidemic form of the disease, but as the difference is often one rather of technical error in certification than of actual difference of malady, it is quite as well to take note of the numbers of deaths under this heading, when endeavouring to compute the true diarrhœa mortality of the City (apart, of course, from comparison with other places the published returns of which are prepared upon a plan uniform with that applied to ours).

The number of deaths referred to enteritis in 1907 was 49, and in the 5 preceding years, respectively, 69,

40, 75, 41 and 39. If these annual numbers be compared with the corresponding yearly totals of deaths from epidemic diarrhœa, it will be seen that the two fluctuate together very regularly. The majority of the deaths, too, occur during the diarrhœa season, at ages when diarrhœa is most fatal, and, as in the case of diarrhœa, the male deaths among the infant cases are considerably more numerous than the female.

Appendicitis was given as the cause of 16 deaths during 1908, and the several annual totals for the 7 years extending from 1907 back to 1901, when appendicitis was first generally certified as a death cause, were 18, 17, 10, 16, 17, 10 and 11.

This condition attacks persons of both sexes at all ages, but males ordinarily suffer more than females to the extent of about 50 per cent, and according to Dr. John Tatham, the largest number of deaths from it in both sexes is between the 10th and 20th year. Of the 16 total deaths from appendicitis in Nottingham during 1908, 7 were of males and 9 of females. Deaths ascribed to it occurred in infancy and old age, but 12 out of the total of 16 were between the 5th and 45th year.

Hernia & other (non-malignant) Obstructive Conditions of the Bowels. (exclusive of those of the appendix).

The number of deaths from obstructive bowel disorder of this character during 1908 was 24, as compared with 30 in 1907, and 22, 26, 26, 33 and 29, respectively, in the preceding 5 years.

Acute Nephritis and Bright's Disease (Chronic Nephritis).—These were certified as death causes in 96 instances, as against 92 in 1907, and 105,

83, 96, 90 and 94 in each of the 5 preceding years, respectively. The deaths from both varieties of the disease taken together during 1908 were equally divided between the sexes—48 to each; but whereas the deaths of males from acute nephritis were 15 in number, against 10 of females, those of males from the chronic variety were only 33 in number, as against 38 of females.

In the country as a whole, nephritis of both kinds is considerably more fatal to males than females, except at certain age-points between 10 and 30 years. There is an increase in fatality for both varieties with advancing age. This begins at about the 25th year for acute nephritis, and at about the 35th year for the chronic. From these points onwards, the mortality increases at a very rapid rate, reaching its maximum in extreme old age—75 years and upwards.

In Nottingham during 1908, 20 out of 25, or 80 per cent of all the deaths from acute nephritis occurred after the 25th year; and 67 out of 71, or 94 per cent of all those from the chronic form took place after the 35th year.

Diseases of the Bladder and Prostate (non-malignant).—There were 15 deaths assigned to these causes during 1908, as against 18 in 1907, and an annual average of 16 for the 5 years ending with 1906.

The majority of these deaths are necessarily those of males; there was one death only of a female attributed to non-malignant disease of the bladder during 1908.

Diseases of the Female Organs of Generation (non-malignant).—These were credited with 13 deaths during 1908, as compared with 11 in 1907, and 12, 18, 13, 9 and 25 in the 5 immediately preceding years, respectively.

Accidents of Childbirth.—The deaths (of mothers) attributed to these accidents were 12 in number during 1908, as compared with 17 in 1907, and 21, 21, 16, 17 and 23 in each of the precedings 5 years, respectively.

The particular accidents, where these were given, and the numbers of deaths from each, were as follows:—Abortion, Miscarriage, 1 death; Puerperal Convulsions, 2; Placenta Prævia, Flooding, 3; Tubal Pregnancy, 1; Rupture of the Uterus, 1; other accidental conditions, 4. I have pointed out in former reports, that owing to the relatively slow increase of our population, and our declining birth-rate, the annual numbers of births in the City vary but little from year to year, and therefore that it is specially permissible in this case to compare the actual numbers of such accidents as those mentioned above, without reference to rates in particular years. I shall, however, now give also the ratio of maternal deaths from such causes to the total number of births of living children, in order to render current records, under this very interesting and important heading, strictly comparable with those of the past. For this last reason I have excluded the number of still-births, which, though now available, have only become so lately.

The proportion of such fatal accidents of childbirth to births during 1908, and the preceding 5 years has been as follows:—1908, 1 in 585; 1907, 1 in 405; 1906, 1 in 322; 1905, 1 in 416; 1904, 1 in 405; 1903, 1 in 366. It is necessary, however, to include the deaths of mothers from puerperal sepsis, in order to obtain the complete maternal mortality. There were 9 of such deaths only during 1908, and the proportion of maternal deaths (this cause included) to the total number of live-births during 1908, and the five preceding years, respectively, were as follows:—1908, 1 in 335; 1907, 1 in 191; 1906, 1 in 169; 1905, 1 in 237; 1904, 1 in 275; and 1903, 1 in 217.

The passing of the Midwives Act of 1902 placed us at once in a better position to obtain information of the occurrence of accidents of childbirth among the large class of women commonly attended by midwives, and for whom, presumably, skilled assistance is not infrequently required, but until last year there was little to show that the strict supervision exercised in Nottingham over the practice of midwives, and the precautions adopted with the view of preventing maternal mortality among their *clientèle*, had borne much useful fruit. During 1908, however, it is gratifying to observe that the maternal mortality, both from the ordinary accidents of childbirth and from septic conditions, was lower than in any previous year. One can only express the hope that this most desirable reduction of maternal mortality will continue.

Deaths due to Accident and Negligence, and Violent Deaths other than Suicides.—The number of deaths put down to causes under this heading, during 1908, was 135. The totals for 1907, and each of the preceding five years respectively, were:—1907, 123; 1906, 119; 1905, 124; 1904, 111; 1903, 93; and 1902, 106. For the five years prior to 1902, the annual average was 114. Of the 135 deaths during 1908, 5 (all of adult males), were in mines or quarries; 14 (9 of males and 5 of females, 5 in childhood, the rest after the 35th year) in vehicular traffic; 2 (both of young adult males) on railways; 3 (2 of males and 1 of a female, between the 10th and 35th year) by machinery; 1 (of a male between 35 and 45 years) by a lethal weapon; 32 (11 of males and 21 of females, 21 of both sexes under 10 years, the rest at various ages up to 75 years, by burns and scalds; 7 (4 of males and 3 of females, 2 of children under 10 years, the rest between 35 and 55 years) by poison; 1 (male of 25 to 35 years) by chloroform during a surgical operation; 10 (all of males, from the 2nd year to the

65th to 75th years age-period) by drowning; 21 (13 of males and 8 of females, all under 1 year) by overlaying in bed; 6 (4 of males and 2 of females, 5 of infants and 1 of an elderly adult) by other methods of suffocation; 22 (7 of males and 15 of females, all but one after 45 years of age) by falls in dwellings; 8 (6 of males and 2 of females, all over the 35th year) by falls in street or elsewhere; 1 (of a male aged 5 to 10 years) by weather agency; 1 (of an aged female) by starvation; and 1 (of a male, 35 to 45 years) by other form of violence not specified. Of these deaths from violence, etc., 77 were of males and 58 of females.

Suicide.—The number of officially recognized suicides in Nottingham during 1908 was 32, 25 by males and 7 by females. The number for 1907 was 41, 26 by males and 15 by females. The proportion of male to female suicides in the country at large is roughly as 3 to 1. The total numbers of suicides in Nottingham for each of the previous five years were, respectively, 26, 44, 27, 31, and 32. Of the 32 recorded during 1908, 6 were by poison (4 m. and 2 f.), æt. from 25 to 65 years; 15 by hanging or other method of strangulation (12 m. and 3 f.), æt. from 20 to 70 years; 6 were by drowning (5 m. and 1 f.), 5 between 20 and 45 years, and 1 between 65 and 75 years; and 5 were by cut or stab (4 m. and 1 f.), 1 between 35 and 45 years, 2 from 55 to 65 years, 1 between 65 and 75 years, and 1 between 75 and 85 years.

The total number of deaths registered as due to violence during 1908 was 168 (R.G.), and correspond to a rate of 0·63 per 1,000 living (63 per 100,000), as compared with 0·64, 0·57, and 0·70 during the three immediately preceding years.

The death-rate per 1,000 from all violent deaths during 1908 was equal to 0·56 in the 76 great towns, to 0·57 in London, to 0·48 in the 142 smaller towns, and to 0·57 in England and Wales as a whole.

Deaths in Public Institutions.—The number of these deaths during 1908 according to my returns was 766, and according to those of the Registrar-General 787. The total (by my returns) for 1907 was 833. The average annual number during the 10 years, 1897–1906, was 738.

The deaths in public institutions in Nottingham during 1908 were equal to 19·5 per cent. of all deaths, in the 76 great towns to 25·9 per cent., in London to 40·1 per cent., and in the 142 smaller towns to 14·2 per cent. The difference between the 14·2 per cent. of the smaller towns and the 40·1 per cent. of London is here very striking.

Uncertified Deaths.—The uncertified deaths in Nottingham during 1908 were shown as 27 by my returns, and as 29 by those of the Registrar-General. The latter figure is equal to 0·7 per cent. of all deaths during the year. The proportion in the great towns during 1908 was equal to 0·9 per cent., in London to 0·01 per cent., and in the 142 smaller towns to 1·5 per cent.

Inquests.—The number of inquests held in Nottingham during 1908 by Mr. C. L. Rothera, the Coroner, or his deputy, numbered 307 (184 on males and 123 on females), according to the return furnished by the Coroner, and 282 according to that of the Registrar-General. Notwithstanding the incompleteness of the Registrar-General's return, I am constrained to use it here—for the sake of consistency—in making comparison between our figures and those of other places, prepared also by him. The proportion of inquests to total deaths, then, in Nottingham during 1908,

according to the Registrar-General, was 7·0 per cent., as against 6·5 per cent. and 6·8 per cent. in the two preceding years. The corresponding proportion in the 76 great towns, in London, and in the 142 smaller towns during 1908 were, respectively, 8·0 per cent., 10·1 per cent., and 6·1 per cent.

Chart of Meteorology, Births, and Deaths in Nottingham during 1908.—The twentieth issue of this Chart, prepared upon practically the same plan as the original, but with additions and improvements introduced from time to time, under the joint direction of Mr. Arthur Brown (City Engineer) and myself, will be found, as usual, under the cover at the end of this Report—except in the abridged copies, from which it is omitted.

THE CITY ISOLATION HOSPITAL AND THE PHTHISIS SANATORIUM, BAGTHORPE, BASFORD, NOTTINGHAM.

The General Isolation Hospital and the Phthisis Sanatorium at Bagthorpe are now alone in use, the Small-pox Hospital at Bulwell being closed.

The number of persons admitted to the whole establishment at Bagthorpe during 1908 for treatment, isolation, or observation, was 718. The corresponding totals for 1907 and the five preceding years were:—1907, 636; 1906, 680; 1905, 594; 1904, 1099; 1903, 808; and 1902, 616.

Total Number of Cases in Hospital, 1908.

With particulars as to (a) Disease, (b) Sex of Patients, (c) Recoveries, (d) Deaths, and
(e) Duration of Stay.

DISEASE.	Remaining at end of 1907.			Admitted during 1908.			Total cases during 1908.	Total cases finally dealt with during 1908.	Total deaths during 1908.	Case-mortality % of total cases, 1908.	Days of average residence.		Remaining at end of 1908.
	No. of Patients.	Recovered.	Died.	No. of Patients.	Recovered.	Died.					Non-fatal.	Fatal.	
Scarlet Fever	M. 30	30	..	125	94	3	155	127	3	..	..	..	28
	F. 33	33	..	185	144	5	218	182	5	..	..	..	36
Total..	63	63	..	310	238	8	373	309	8	2.59	60	7.25	64
Enteric Fever	M. 26	26	..	41	20	4	67	50	4	..	..	..	17
	F. 15	15	..	40	30	4	55	49	4	..	..	..	6
Total..	41	41	..	81	50	8	122	99	8	8.08	67.5	14.75	23
Diphtheria ..	M. 19	19	..	116	93	8	135	120	8	..	..	..	15
	F. 24	24	..	141	120	5	165	149	5	..	..	..	16
Total..	43	43	..	257	213	13	300	269	13	4.83	51	8.9	31
Phthisis ..	M. 2	2	..	30	20	3	32	25	3	..	..	..	7
	F. 5	4	1	24	15	4	29	24	5	..	..	..	5
Total..	7	6	1	54	35	7	61	49	8	13.1	108	119	12
Other Cases ..	M. ..	..	..	4	4	..	4	4	..	..	..	..	..
	F. ..	..	..	12	11	..	12	11	..	..	..	..	1
Total..	..	..	..	16	15	..	16	15	..	..	20	..	1
TOTAL	154	153	1	718	551	36	872	741	37	5.0	61.3	37.5	131

The following is an analysis of the 718 total admissions of 1908, according to complaints (or other ground of admission), and sex of patients:—Scarlet fever, 310 patients, males 125, females 185; enteric fever, 81 patients, males 41, females 40; diphtheria, 257 patients, males 116, females 141; phthisis, 54 patients, males 30, females 24; other patients admitted with incidental complaints requiring isolation or under mistaken diagnosis, and persons taken in for observation, disinfection, &c., 16 altogether, 4 males and 12 females.

The cases of various kinds in hospital at the close of 1907 were 154 in number: 63 of scarlet fever (30 m. and 33 f.), 41 of enteric fever (26 m. and 15 f.), 43 of diphtheria (19 m. and 24 f.), and 7 of phthisis (2 m. and 5 f.). Those still in hospital at the end of 1908 numbered 131: 64 of scarlet fever (28 m. and 36 f.), 23 of enteric fever (17 m. and 6 f.), 31 of diphtheria (15 m. and 16 f.), 12 of phthisis (7 m. and 5 f.), and one of angina pectoris (f.).

Particulars of the irregular admissions will be found in the preceding table (p. 102), and in that headed “other cases” (p. 117 post).

Such cases frequently give rise to considerable inconvenience, expense, and anxiety in an isolation hospital, on account of the necessity of providing them with separate wards and nurses when the mistake is detected at or after admission, and of the risk in any case of cross-infection between the patients themselves and others in the institution. Two cases of measles wrongly certified as scarlet fever, one each of lead colic, influenza, and lobar pneumonia sent in for enteric fever, and one of thrush mistaken for diphtheria, are good examples of this class which occurred during 1908.

The highest and lowest numbers of beds occupied in each month of the year are shown in the accompanying table. As usual, where, in this country, scarlet fever,

enteric fever, and diphtheria, are the staple diseases dealt with, and the proportion of cases admitted is fairly constant, as with us, the numbers of occupied beds were relatively high at the beginning of the year—principally through the increase in the number of admissions towards the end of 1907—fell away during the spring and summer, and rose again sharply in the autumn and winter. The highest numbers of occupied beds in each month ranged from between 150 and 153 in January,

Table showing the number of Beds occupied during each month of the year 1908.

MONTH.	BEDS OCCUPIED.		MONTH.	BEDS OCCUPIED	
	Highest.	Lowest.		Highest.	Lowest.
January	150	100	July	103	94
February	117	104	August	113	89
March	116	100	September ..	147	109
April	102	92	October	153	135
May	96	85	November ..	152	136
June	101	89	December ..	153	134

October, November, and December, to between 96 and 103 in April, May, June, and July; the lowest varied from between 85 and 94 in April, May, June, July, and August, to between 134 and 136 in October, November, and December.

SCARLET FEVER. The reported cases of scarlet fever during 1908 numbered 595, and 310, or 52·1 per cent. of these were admitted to the City Isolation Hospital. The numbers taken in during each month of the year are given in the table on page 117 of this Report. The proportion of all the actual and reputed cases which were admitted during 1907 and the five preceding years were, respectively, 68·7 per cent., 57·4 per cent., 56 per cent., 39 per cent., 34 per cent., and 52 per cent. Of the 310 cases admitted during 1908, 125 were of males and 185 of females. There were 30 male and 33 female cases left

over from 1907, and 28 male and 36 female cases still under treatment at the end of 1908. The residuals from 1907 must be included with those admitted in 1908 to furnish the total of recoveries and deaths for that year, but the cases remaining at the close of 1908 must be carried over to the account for 1909. This being done, we find 309 cases as constituting the total finally dealt with in 1908. There was no mortality among the 30 male and 33 female cases left in hospital at the end of 1907, but there were three deaths among the male cases admitted during 1908, and five among the female cases. If now we estimate the mortality upon all the cases finally dealt with during 1908, including those left over from 1907, we obtain a case death-rate of 2·59 per cent. for both sexes, and rates of 2·4 per cent. for males, and 2·8 per cent. for females; but if we calculate the mortality as proportional only to the cases admitted and finally dealt with in 1908, among which the deaths actually occurred, we discover a total case mortality of 3·25 per cent., with sexual rates of 3 per cent. for males, and 3·4 per cent. for females. The first of these methods is that usually adopted for estimating the annual case-mortality, and if we compare the rate for both sexes thus obtained with the corresponding rates of the past five years, we find that it is higher than any except that of 1906. The case death-rates of scarlet fever cases in the hospital during the past five years have been as follows:—1907, 1·75 per cent.; 1906, 2·64 per cent.; 1905, 2·31 per cent.; 1904, 1·90 per cent.; 1903, 1·09 per cent.

There were three deaths only among the 285 cases of scarlet fever nursed at home during 1908; the home case-mortality therefore was equal to little more than one per cent. The lowness of this rate is explained by the now very general practice of sending the severe cases to hospital, and keeping the milder at home.

Age and Sex Distribution of Non-fatal and Fatal Cases of Undoubted Scarlet Fever under treatment in Hospital during 1908, exclusive of those remaining at the close of the year, but inclusive of those carried over from 1907.

AGE PERIODS.	MALES.		FEMALES.	
	Recoveries.	Deaths.	Recoveries.	Deaths.
Under 1 year	2	..	1	..
Between 1 and 2 years	4	..	5	2
" 2 and 3 "	8	..	10	..
" 3 and 4 "	9	..	8	..
" 4 and 5 "	9	2	10	..
" 5 and 10 "	57	1	96	2
" 10 and 15 "	25	..	28	..
" 15 and 20 "	4	..	8	..
" 20 and 25 "	1	..	4	..
" 25 and 30 "	4	..	3	1
" 30 and 35 "	1	..	2	..
" 35 and 40 " .. ..	..	..	1	..
Over 40 years .. ..	..	..	1	..
TOTALS	124	3	177	5

TOTAL CASES, 309; deaths, 8; *case-mortality*, 2·59%.

MALE CASES, 124; deaths, 3; *case-mortality*, 2·42%.

FEMALE CASES, 177; deaths, 5; *case-mortality*, 2·82%.

Above cases constituted as follows:—

63 left over from 1907

310 admitted during 1908

373

64 left over for 1909

309 of definite issue during 1908.

Actual Age at Death, and Cause in Fatal Cases.

MALES. (3)			FEMALES. (5)		
4 years	..	Toxæmia.	1 $\frac{9}{12}$ years	..	Meningitis.
4 "	..	Diffuse cervical sup- puration; toxæmia.	1 $\frac{9}{12}$ "	..	Necrosis of neck tissues; toxæmia.
5	..	Septicæmia.	5 "	..	Toxæmia.
			9 "	..	Do. hæmorrhagic.
			28 "	..	Endocarditis (old stand- ing).

The tables which accompany this section show at a glance the age and sex incidence and mortality, the actual causes of death in fatal cases, and the actual and proportional numbers of cases in which the more important complications occurred.

It has been customary with us to consider all cases of scarlet fever occurring in the houses to which our hospital patients return on discharge, within 21 days of such return, as having arisen through infection carried to them by our patients. Many cases occurring in such houses during this period will have had other source of origin, and many after the lapse of 21 days will have had origin in our cases; but it is necessary to adopt some time limit, and, having regard to all the probabilities, this term appears to be reasonable.

There were seven cases of scarlet fever recorded during 1908 as having occurred under these circumstances, and which I have therefore reckoned as "return cases" due to infection carried by patients discharged from our hospital. These cases occurred in January (1), July (1), August (2), October (1), and December (2). The total number is equal to 2·3 per cent. of all cases finally disposed of during the year, as against 1·76 per cent. in 1907, 1·17 per cent. in 1906, 1·28 per cent. in 1905, 3·48 per cent. in 1904, and 2·18 per cent. in 1903. The somewhat increased severity of type observable in the cases dealt with during 1908, as compared with the three antecedent years, is the most probable explanation of the larger proportion of such cases in that year.

Open-air treatment is still employed by us as far as possible for all cases of acute specific diseases coming under our charge, but, while undoubtedly advantageous for practically all such cases, its beneficial effects are most pronounced in those with, so-called, septic complications; and as scarlet fever is a complaint in which such complications are specially prone to occur, it seems appropriate to deal with the subject here. In rough,

Complications among Scarlet Fever Cases during 1908.

COMPLICATIONS.	Cases affected.	Percentage of all Cases.
Nephritis	8	2·6
Rhinorrhœa	40	12·9
Otorrhœa	21	6·8
Vaginitis	1	0·3
Abscess—Cervical .. .	7	2·3
Gluteal	1	0·3
Second attacks	17	5·5
Third attacks	2	0·6
Meningitis	1	0·3
Arthralgia	4	1·3
Conjunctivitis	2	0·6
Empyema	1	0·3
Furunculosis	1	0·3
Herpes Zoster	1	0·3
After burns	1	0·3
Diphtheria	3	1·0

wet, and cold weather, the open corridors between the ward-blocks are utilized for this purpose, but whenever weather conditions are favourable, the patients are nursed in the open, their beds being placed on the paths or grass immediately outside the ward-blocks. It must be obvious, however, that this is but a makeshift arrangement at best, and one that must entail an immense amount of labour upon the nursing staff. And, seeing that the open-air method of treatment for such diseases as those dealt with at our isolation hospitals has now, with us, passed beyond the experimental stage, and become established as in all respects advantageous, I would suggest that verandahs be built along one side of each ward-block, communicating with the ward interiors by means of doorways formed by extending the existing window openings to the floors. This alteration has already been carried out for a comparatively small cost at the temporary pavilions now used for the purpose of a Phthisis sanatorium. If

this structural change were effected, upon lines similar to those followed at the sanatorium wards, in one only of the other ward-blocks each year, beginning with the "acute" scarlet fever block, the annual addition to the hospital expenditure entailed by this most desirable alteration would be relatively inconsiderable.

Of the 237 cases or reputed cases of Enteric Fever **ENTERIC FEVER.** notified to me during 1908, 81, or 34 per cent., were removed to the City Isolation Hospital. In addition to these, 89 cases were taken to the General Hospital, and 15 to the Union Workhouse Infirmary. No less than 78 per cent., therefore, of all the known cases of enteric fever in Nottingham during 1908 were sent to hospital.

Owing to the fact that a large majority of the enteric fever cases in Nottingham occur in poor houses, it is frequently desirable, both in the interests of the patients themselves, and of those living with them or near them, that even a larger proportion than 78 per cent. of all should be removed from their homes. In the light of this fact, the recent reiterated proposal of the Monthly Board at the General Hospital to reduce the amount of bed accommodation hitherto provided for enteric fever cases at that institution, must be viewed with nothing less than consternation—apart altogether from considerations respecting the educational value of the enteric fever cases to an institution like the General Hospital. Even if the Corporation were prepared to double the existing bed accommodation for enteric fever at the Isolation Hospital, this would not entirely meet the situation, as many of the cases are now and have been for many years sent to hospital at a stage when a lengthy journey—like that to Bagthorpe from some parts of the City—would very probably be more than they could bear.

Age and Sex Distribution of Cases of Enteric Fever under treatment in Hospital during 1908, including those left over from 1907, but excluding those remaining at the end of 1908.

AGES.	MALES.		FEMALES.	
	Recovered.	Died.	Recovered.	Died.
Under 5 years	6	..	3	..
Between 5 and 10 years ..	7	1	7	1
" 10 " 15 " ..	7	1	7	1
" 15 " 20 " ..	4	..	6	..
" 20 " 25 " ..	10	..	9	..
" 25 " 30 " ..	4	..	2	1
" 30 " 35 " ..	3	..	1	..
" 35 " 40 " ..	2	1	7	..
Over 40 years	3	1	3	1
TOTALS ..	46	4	45	4

TOTAL CASES, 99.—Deaths, 8. *Case-mortality*, 8·08%.

MALE CASES, 50.—Deaths, 4. *Case-mortality*, 8·00%.

FEMALE CASES, 49.—Deaths, 4. *Case-mortality*, 8·16%.

The above 99 cases are made up as follows:—

41 remaining at end of 1907.

81 admitted during 1908.

122

23 remaining at end of 1908.

99 finally dealt with during the year.

In the fatal cases death was due to Toxæmia in 2, Meningitis in 2, Exhaustion in 2, Pleuro-pneumonia in 1, and Peritonitis in 1.

There were altogether 122 cases of enteric fever under treatment at Bagthorpe Hospital during the year, 41 remaining over from 1907, and 81 admitted during 1908; but the 23 left in turn at the close of 1908 must be taken from the total of 122 to find the true total for the 1908 report. The total thus arrived at is 99.

As in the case of scarlet fever, the patients taken over from the preceding year all recovered, and the eight deaths recorded all occurred among the 81 admitted during 1908—less the 23 remaining at its close. There were thus four deaths in 24 males and four in 34 females, equal to a case-mortality of 17 per cent. for males and

12 per cent. for females. But if, as is customary, we reckon the mortality as proportional to all the cases finally dealt with during the year, we obtain a total case death-rate of 8.08 per cent., a male rate of 8.0 per cent. and a female rate of 8.16 per cent., which are much more satisfactory figures—in each instance less than half the corresponding rates for 1907.

Cases of enteric fever were admitted during each month of the year, excepting April, and the numbers of monthly admissions varied from two in February and March, and three in January and June, to 11 in October and December, 13 in August and November, and 14 in September (see Table on page 117).

A full account of enteric fever in its endemic and epidemic aspects in 1908, and other recent years, will be found under the heading of enteric fever in the epidemic disease section of this report.

The notifications of separate cases of diphtheria **DIPHTHERIA.** numbered 454 during 1908. Two hundred and fifty-seven cases, or 57 per cent. of this total, reckoned as actual cases, were removed to the City Isolation Hospital. The proportion of total cases so removed in the five preceding years were, 48 per cent., 47 per cent., 44 per cent., 24 per cent., and 30 per cent.

Of the 257 cases removed in 1908, 116 were of males and 141 of females. Fifteen of the male cases and 16 of the female were left in hospital at the close of 1908; but against these, 19 male cases and 24 female were taken over from 1907, leaving a balance of four male and eight female cases to be added to the admissions of 1908, to make up the total of cases actually disposed of during that year. The grand total thus obtained amounts to 269, made up of 120 male cases and 149 female.

Age and Sex Distribution of Cases of Diphtheria under treatment during 1908, including those left over from 1907, but excluding those remaining at end of 1908.

AGES.	MALES.		FEMALES.		Monthly Admissions.
	Recovered.	Died.	Recovered.	Died.	
Under 1 year ..	3	..	2	..	Jan. 22
Between 1 and 2 years	6	..	2	..	Feb. 32
" 2 and 3 "	2	1	3	..	March 23
" 3 and 4 "	11	..	6	1	April 29
" 4 and 5 "	13	1	11	..	May 16
" 5 and 10 "	35	5	54	3	June 15
" 10 and 15 "	23	1	25	..	July 23
" 15 and 20 "	9	..	13	1	Aug. 17
Over 20 years ..	10	..	28	..	Sept. 21
					Oct. 22
					Nov. 19
					Dec. 18
TOTALS	112	8	144	5	257 whole year.

TOTAL CASES, 269.—Deaths, 13. *Case-mortality*, 4·83 %.

MALE CASES, 112.—Deaths, 8. *Case-mortality*, 7·1 %.

FEMALE CASES, 144.—Deaths, 5. *Case-mortality*, 3·5 %.

The 269 cases are made up of—

43 " remaining at end of 1907.

257 " admitted in 1908.

—
300

31 " left over at end of 1908.

—
269 " finally dealt with during the year.
==

CAUSES OF DEATH.—Toxæmia, 5; Toxæmia and Pernicious Anæmia, 1; Heart paralysis, 4; Hemiplegia, 1; Pyæmia, 1; Phthisis, 1.

ANTITOXIN.

257 cases admitted :—

213 recovered ; of these 198 had 941,000 units of antitoxin, or an average of 4,753 per case.

13 died ; these had 101,000 units, or an average of 7,769 per case.

31 carried over into 1909.

TRACHEOTOMIES.

F.	1	aged	$\frac{5}{12}$	Recovered.
	1	"	6	"
M.	1	"	1	"
	1	"	5	"
	1	"	6	"
	1	"	11	"
	1	"	13	"

As in the case of both scarlet fever and enteric fever, however, there was no death among the cases in hospital at the commencement of the year. If the mortality be reckoned as proportional of the 226 cases admitted and disposed of in 1908, we obtain a total case death-rate of 5·75 per cent., a male rate of 8 per cent., and a female rate of 4 per cent. But, if we estimate the case-mortality upon all the cases seen to a close in the year, the total case death-rate becomes one of 4·83 per cent., the male rate being 7·1 per cent., and the female 3·5 per cent. Whichever method be adopted, the rates are low, and compare for the most part very favourably with those of past years.

Tracheotomy was performed upon seven patients, and was followed by recovery in every instance. Five of these patients were males, aged 1, 5, 6, 11, and 13 years, respectively; and two were females, aged 5 months, and 6 years, respectively. Three of the patients upon whom it was performed were sent in almost asphyxiated. Such a proportion of recoveries under the circumstances is very exceptional.

Antitoxin was injected in every case where its use was likely to be in the slightest degree beneficial, and, of the 213 patients who recovered, 198 received between them 941,000 units, or an average of 4,753 units each, while the 13 who died received an aggregate of 101,000 units, or an average of 7,769 each.

In the article on diphtheria in the body of this Report, I have already emphasized the importance of the early use of this remedy, and quoted the striking figures of the Brook Hospital of the Metropolitan Asylums Board in support of my argument. I need only add here, that there is now no excuse for neglect to use the serum in every case where the diagnosis of diphtheria is established, or reasonably suspected at a sufficiently early date, as the serum is given out gratuitously from the Health Department to all medical men in attendance upon poor patients requiring it.

The City Bacteriologist, Dr. F. H. Jacob, states that he has examined and reported during 1908 upon 1,743 "swabs" (from throat, nose, etc.), of cases and suspected cases of diphtheria. It must not be forgotten that this test is quite as important when used to determine the question whether a person is or is not free from infection after an attack of diphtheria, as for settling the diagnosis in the first instance. Many so-called carrier cases—or cases carrying and distributing the particulate infection—of diphtheria, enteric fever, and scarlet fever, without exhibiting the ordinary clinical symptoms of the disease or diseases, are obviously far more dangerous than ordinary manifest cases. At the City Isolation Hospital it is still the constant practice to detain all diphtheria patients until two consecutive bacterial examinations, at not less than three days interval, have been made with a negative result. The strict observance of this rule entailed an average residence in hospital for all diphtheria patients during 1908 of 51 days.

With such precautions as these, the liability to return infection, *i.e.*, to the infection of others as a result of the return of diphtheria patients from hospital to their homes, is extremely small.

TUBERCULOUS PHTHISIS.

The patients with tuberculous phthisis admitted to the Sanatorium on the Isolation Hospital enclosure during 1908, numbered 54. These, with seven left over from 1907, make up a total of 61 patients under treatment and training during the year, 12 of whom remained on at its close. The accompanying list of the cases is, I think, sufficiently descriptive of them.

It is not possible to deal in the same strict statistical manner with these cases of tuberculous phthisis as with those of the acute specific diseases, both on account of the frequently insidious commencement, and protracted and devious course of the disease,

NOTTINGHAM. 1908.—Cases of Phthisis at Municipal Sanatorium.

Name.	Sex.	Age.	Occupation.	Date of Admission.	Number of days in Hospital.	Condition on Admission.	Weight on Admission.	Weight on Discharge.	Condition on Discharge.
E. G.	M.	9	School Boy ...	23rd Jan., 1908	243	Both lungs extensively affected ...	3 st. 8½ lbs.	4 st. 0 lbs.	Improved.
T. W.	M.	29	Soldier ...	1st Feb. „	92	Right lung slightly „	10 st. 3 lbs.	...	Improved.
H. R.	M.	37	Twisthand ...	1st „ „	2	Both lungs „	...	...	Died.
T. C.	M.	15	Metal Turner ...	4th „ „	Still in	Right lung slightly „	5 st. 5 lbs.	7 st. 13½ lbs.*	Improved. No Physical signs.
J. H.	M.	21	Policeman ...	5th „ „	170	Right lung slightly „	...	...	In <i>statu quo</i> .
A. D.	F.	34	Housework ...	13th „ „	51	Both lungs „	...	...	In <i>statu quo</i> .
E. G.	F.	42	Housework ...	25th „ „	67	Both lungs „	8 st. 13 lbs.	...	In <i>statu quo</i> .
W. H. D.	M.	35	Bricklayer ...	25th „ „	181	Both lungs „	8 st. 2½ lbs.	9 st. 5 lbs.	Improved.
G. H.	F.	22	Warehouse Girl ...	4th Mar. „	126	Left lung slightly „	10 st. 3½ lbs.	10 st. 8½ lbs.	Improved. No Physical signs.
F. T.	F.	17	...	14th „ „	98	Both lungs „	6 st. 2 lbs.	7 st. 7½ lbs.	Improved.
E. G.	M.	9	School Boy ...	18th „ „	119	Right lung slightly „	3 st. 11 lbs.	4 st. 1½ lbs.	Improved. No Physical signs.
E. A.	F.	19	Dressing-room hand	3rd April „	53	Both lungs severely „	6 st. 0 lbs.	...	Died.
E. H.	F.	16	...	5th „ „	91	Both lungs severely „	7 st. 6½ lbs.	...	Died.
J. S. M.	M.	28	Clerk ...	13th „ „	40	Both lungs severely „	8 st. 12½ lbs.	8 st. 13 lbs.	In <i>statu quo</i>
W. H. B.	M.	25	Stone Carver ...	15th „ „	218	Both lungs severely „	8 st. 9½ lbs.	...	In <i>statu quo</i>
A. H. S.	M.	26	Boiler Washer ...	18th „ „	91	Both lungs severely „	9 st. 7 lbs.	9 st. 8 lbs.	Slightly improved.
A. W.	F.	34	Housework ...	29th „ „	0	...	...	...	Refused to stop in.
L. R.	F.	17	Clerk ...	5th May „	46	Left lung slightly „	6 st. 9 lbs.	7 st. 4½ lbs.	To General Hospital for Operation.
J. E. L.	M.	16	Printer ...	8th „ „	85	Left lung slightly „	8 st. 0 lbs.	8 st. 13 lbs.	Improved. No Physical signs.
M. A. S.	F.	27	Housework ...	15th „ „	228	Both lungs severely „	8 st. 0 lbs.	...	Died.
J. A.	M.	51	Gasworker ...	18th „ „	133	Both lungs severely „	10 st. 7½ lbs.	...	Died.
L. H.	M.	22	Brasswinder ...	13th June „	119	Both lungs slightly „	8 st. 11½ lbs.	8 st. 10 lbs.	Got worse.
P. W. W.	M.	28	Dispenser ...	15th „ „	3	Right lung slightly „	...	...	Refused to stop in.
H. S.	M.	21	Warehouseman ...	24th „ „	115	Right lung slightly „	9 st. 10½ lbs.	10 st. 10 lbs.	Improved. No Physical signs.
E. M.	F.	18	Machinist ...	29th „ „	85	Right lung „	7 st. 7½ lbs.	7 st. 10 lbs.	Improved.
E. L.	F.	15	Warehouse Girl ...	1st July „	76	Left lung slightly ...	8 st. 6½ lbs.	9 st. 5 lbs.	Improved.

* Weight at present time.

NOTTINGHAM, 1908.—Cases of Phthisis at Municipal Sanatorium—*continued*.

Name.	Sex.	Age.	Occupation.	Date of Admission.	Number of days in Hospital.	Condition on Admission.	Weight on Admission.	Weight on Discharge.	Condition on Discharge.
H. W.	F.	34	Lacehand ...	4th July, 1908	71	Right lung slightly affected ...	7 st. 2 lbs.	7 st. 6 lbs.	Improved. No Physical signs.
L. R.	F.	17	Clerk ...	4th „ „	48	Left lung slightly „ ...	7 st. 5 lbs.	7 st. 5 lbs.	Improved. No Physical signs.
G. D.	M.	30	Policeman ...	6th „ „	109	After Hæmorrhage. No physical signs	10 st. 13½ lbs.	11 st. 5 lbs.	Improved. No Physical signs.
J. H. S.	M.	26	Bleach-yard hand	17th „ „	64	Both lungs affected ...	10 st. 7½ lbs.	10 st. 7 lbs.	In <i>statu quo</i> .
L. P.	F.	23	Machinist ...	27th „ „	92	Both lungs „ ...	7 st. 5 lbs.	7 st. 11 lbs.	Improved.
A. C.	M.	20	Pattern Maker ...	10th Aug. „	131	Right lung slightly affected ...	8 st. 3 lbs.	9 st. 7 lbs.	Improved. No Physical signs.
M. G.	F.	21	Book-keeper ...	17th „ „	83	Right lung slightly „ ...	6 st. 7 lbs.	7 st. 4½ lbs.	Improved.
A. P.	F.	29	Lacehand ...	5th Sept. „	110	Left lung slightly „ ...	6 st. 13 lbs.	7 st. 13½ lbs.	Improved.
H. T.	M.	18	Iron Turner ...	5th „ „	110	Both lungs slightly „ ...	5 st. 13 lbs.	6 st. 11 lbs.	Improved. No Physical signs.
H. R.	M.	39	Needle Maker ...	5th „ „	110	Both lungs „ ...	8 st. 12½ lbs.	9 st. 5½ lbs.	In <i>statu quo</i> .
A. H.	M.	32	Warehouseman ...	12th „ „	70	Both lungs slightly „ ...	8 st. 3 lbs.	9 st. 6 lbs.	Improved.
M. A.	F.	23	Lacehand ...	17th „ „	68	Right lung severely „ ...	...	...	Died.
M. C.	F.	37	Nurse ...	21st „ „	201	Right lung slightly „ ...	8 st. 9 lbs.	9 st. 3 lbs.	Improved.
F. B.	F.	19	Lacehand ...	22nd „ „	60	Both lungs „ ...	7 st. 6 lbs.	7 st. 7½ lbs.	Improved.
W. L.	M.	35	Bricklayer ...	29th „ „	42	Both lungs severely „ ...	...	...	Died.
J. L.	M.	50	Gasworker ...	14th Oct. „	59	Both lungs „ ...	11 st. 4 lbs.	12 st. 11 lbs.	Improved.
H. T.	M.	33	Labourer ...	23rd „ „	50	Both lungs „ ...	9 st. 5 lbs.	10 st. 5 lbs.	In <i>statu quo</i> .
W. H. D.	M.	35	Bricklayer ...	27th „ „	Still in	Both lungs „ ...	8 st. 8 lbs.	8 st. 4½ lbs.*	Improved.
E. A. E.	F.	34	Housework ...	29th „ „	28	Right lung „ ...	7 st. 1½ lbs.	6 st. 11 lbs.	In <i>statu quo</i> .
F. L.	M.	11	School Boy ...	5th Nov. „	84	Both lungs severely „ ...	3 st. 10 lbs.	3 st. 12½ lbs.	Improved.
E. W.	F.	28	Housework ...	13th „ „	83	Both lungs slightly „ ...	6 st. 10½ lbs.	7 st. 13 lbs.	Improved.
F. R.	M.	36	Hairdresser ...	16th „ „	124	Right lung severely „ ...	8 st. 7 lbs.	9 st. 1 lb.	Improved.
A. P.	M.	22	Carpenter ...	26th „ „	Still in	Right lung slightly „ ...	10 st. 12½ lbs.	11 st. 13½ lbs.*	Improved. No Physical signs.
H. F.	F.	44	Charwoman ...	30th „ „	148	Both lungs slightly „ ...	10 st. 2 lbs.	10 st. 5 lbs.	Improved.
G. B.	M.	29	Printer ...	4th Dec. „	49	Right lung severely „ ...	8 st. 2 lbs.	8 st. 5½ lbs.	Improved.
M. S.	F.	38	Housework ...	5th „ „	46	Right lung slightly „ ...	7 st. 4 lbs.	7 st. 10½ lbs.	Improved.
E. H.	M.	25	Warehouse Porter	10th „ „	62	Both lungs severely „ ...	10 st. 3 lbs.	...	Died.
B. D.	F.	18	Pattern Girl ...	18th „ „	36	Both lungs severely „ ...	6 st. 13 lbs.	...	In <i>statu quo</i> .

* Weight at present time.

and because many of the patients are admitted only for short terms, and leave before any very decided change in their condition has taken place. Indeed, it must be advantageous to secure as large a number of patients of the latter class as is compatible with efficient training, in order that the teaching of the means of prevention and cure for this disease, which it is one of the principal objects of a municipal sanatorium to promote, shall be as widely diffused as possible.

Of course it is very desirable that hospital or sanatorium accommodation should be available for patients with the disease in an advanced stage, in some measure for their own sake, on humanitarian grounds, but principally to prevent the spread of infection at home by their agency; but as such accommodation is already provided by the Union Workhouse Authorities, and as, owing to the limited available space at the Isolation Hospital Sanatorium, it is impossible to avoid mixing such patients, when admitted there, with those in a more hopeful condition, I consider that under present circumstances the admission of such advanced cases at the Municipal Sanatorium should not be specially encouraged.

A reprint of the leaflet containing simple instructions for tuberculous patients, and those having charge of them or living with them, which has been issued from the Health Department during the past 16 years, will be found in the Appendix of this Report.

I need, perhaps, hardly repeat here, that the sanatorium exists principally for the benefit of poor people, and that an inclusive charge of 10/6 a week is made for each patient.

In concluding this article, I desire to acknowledge, very gratefully, the important part played in promoting the success of the Sanatorium and the comfort of its inmates during the past year, by the Committee of

Lady Visitors appointed by the Social Guild Institution with the approval of the Health Committee. These ladies have regularly visited the Sanatorium and its patients, and supplied the latter with books, papers, games, clothing, and other useful articles; and have also afforded to myself and other officials connected with the management, in a tactful manner, much useful advice and assistance. The names of the ladies are as follows:—Mrs. Bousfield, Mrs. F. J. Bradley, Miss Henrietta Carey, Mrs. Cattle, Miss Hancock, Miss Alice Morley, and Mrs. Ryles.

I wish also very specially to acknowledge the services of Miss Henrietta Carey and Miss Katherine Musson, in collecting from the patients and their friends, and from various charitable persons, considerable sums of money, to defray the charges for the patients' maintenance and treatment at the Sanatorium.

OTHER CASES.

The table of "other cases" (page 117), admitted during the year, shows that two cases of measles were sent in as cases of scarlet fever, one of lead colic, one of influenza, and one of lobar pneumonia as of enteric fever, and one of thrush as of diphtheria. The errors of diagnosis in these cases, however, were not productive of cross-infection or other serious results. The same table deals also with "other cases" of sickness or injury occurring among members of the hospital staff, admitted at various times during the year. There was no fatality in this group of cases.

But, in addition to these incidental cases of exceptional sickness, there were no less than 11 cases of the diseases ordinarily dealt with in the hospital, and one of acute septicæmia, which occurred among members of the hospital staff. The matron, five other members of the female staff, and one of the male staff suffered from diphtheria; two nurses and one ward-maid suffered

from enteric fever, and one nurse from scarlet fever; and the Resident Medical Officer contracted severe septicæmia. Such a chapter of accidents in the short space of one year is of course altogether exceptional. I am pleased, finally, to be able to record a complete absence of fatality from this group of cases also, and, not only this, but a complete recovery without apparent constitutional injury in every case.

Table showing monthly admissions of Cases of Scarlet Fever, Enteric Fever, Diphtheria and Phthisis, and "Other Cases," together with the monthly numbers of return cases of Scarlet Fever during 1908.

MONTHS.			CASES ADMITTED.					Return Cases of Scarlet Fever.
			Scarlet Fever.	Enteric Fever.	Diphtheria.	Phthisis.	Other Cases.	
January	..	..	19	3	22	1	1	1
February	..	..	10	2	32	7	1	..
March	..	..	25	2	23	3	1	..
April	..	..	13	..	29	6	..	..
May	..	..	26	4	16	4	1	..
June	..	..	23	3	15	4	3	..
July	..	..	15	5	23	6	1	1
August	..	..	30	13	17	2	1	2
September	..	..	38	14	21	8	1	..
October	..	..	43	11	22	4	2	1
November	..	..	37	13	19	5	3	..
December	..	..	31	11	18	4	1	2
TOTALS	..	..	310	81	257	54	16	7

Table of "Other Cases" admitted during 1908.

- 2 Measles, one wrongly certified as Scarlet Fever.
- 1 Lead Colic, wrongly certified as Enteric Fever.
- 1 Influenza, " " " "
- 1 Lobar Pneumonia " " " "
- 1 Thrush " Diphtheria.
- 4 Hospital Throat
- 1 Angina Pectoris
- 1 Influenza
- 1 Quinsy
- 1 Pemphigus
- 1 Hysteria
- 1 Fall from Ladder

} Hospital Staff.

The total hospital expenditure for the year ending March 31st, 1909—the cost of the Calendar year not being available—is given by the City Accountant as £7,097. This shows an advance of £642 upon the expenditure of the year before, but the increase in cost is satisfactorily explained by the additional work the institution has been called upon to do—and has done—during the last year.

The patients dealt with in 1908–9 were more than 100 above the total for 1907–8. It is, as I have often explained, a somewhat difficult matter to determine satisfactorily the cost per occupied bed, because the beds kept ready for occupation, and there are necessarily many such, are often almost as costly as those actually tenanted.

In estimating the cost per patient for the past year, I have taken 128 beds as the number kept on the average either in actual use, or ready for immediate use during the year. If this number be divided into the total expenditure, we obtain a sum of £55 8s. 10d., representing the cost per bed. The cost per patient, taking the gross total of patients actually under treatment, works out at £8 2s. 1d., and with the smaller number of those whose cases were finally dealt with during the year, at £9 8s. 10d. The cost per bed is slightly above the corresponding cost of the previous year, the cost per patient, by both methods of estimation, considerably less.

Dr. Owen H. Peters, who had held the appointment of Resident Medical Officer and General Assistant to myself since December, 1905, obtained another post and left us in April of 1908. Dr. Peters is a highly trained and thoroughly efficient officer, and performed all his duties with us in an eminently satisfactory manner. He was succeeded on April 17th, 1908, by Mr. Oswald Kentish Wright, M.R.C.S., L.R.C.P. (Lond.), a gentleman whose work will bear comparison with that of the best of his predecessors.

Miss Julia Taylor, who, after long service as a Sister and Deputy Matron, succeeded Miss Wallace as Matron of the Hospital in May, 1907, continues to act in that capacity in a thoroughly capable way.

Handbills, Leaflets, &c. (*Distributed from the various sections of the Health Department.*) Leaflet literature, relating to (a) the feeding and care of infants, (b) the prevention of diarrhœa and cholera, (c) vaccination and small-pox, (d) the prevention of tuberculous consumption, (e) the care of scarlet fever patients discharged from Fever Hospitals, (f) the provision of the Shop Hours Acts, and (g) the Home Office requirements as regards "sanitary accommodation" in factories, will be found reprinted in Appendix A of this Report.

WORK IN DEPARTMENTS.

Municipal Laboratory of Bacteriology.

—The City Bacteriologist, Dr. F. H. Jacob, supplies the following statement of official bacteriological work done during 1908:—

Particulars of Material received for Examination.

(a) In connection with Human Cases of Tuberculosis or suspected Tuberculosis.

1. Specimens examined for tubercle bacilli,	
with a positive result - - - -	27
2. Do. do. with a negative result	- 124

151

(b) In connection with Human Cases of Diphtheria, or suspected Diphtheria.

1. Specimens (throat, nose, and ear swabs) examined for bacillus diphtheriæ, with a positive result	-	-	-	-	-	482
2. Do. do. with a negative result						1261
						<hr/> 1743

(c) In connection with Human Cases of Enteric Fever, or suspected Enteric Fever.

Widal's reaction—

1. Positive result	-	-	-	-	-	77
2. Negative result	-	-	-	-	-	110
						<hr/> 187

(d) In connection with Tuberculosis or suspected Tuberculosis in Milch Cows.

1. Milk examined with positive result	-	1
2. Do. do. negative result	-	17
3. Do. do. suspicious result	-	2
		<hr/> 20

(e) In connection with suspected existence of Typhoid Bacilli in Mussels.

1. Mussels examined with positive result	-	2
2. „ „ „ negative „	-	6

(f) In connection with supposed existence of Bacilli of colon group in Milk.

Milks examined with negative result	-	-	3
-------------------------------------	---	---	---

(g) In connection with supposed existence of Anthrax Bacilli in Milk.

Milks examined with negative result	-	-	2
-------------------------------------	---	---	---

(h) In connection with diseased or otherwise unwholesome meats (suspected Bac. enteritidis Gärtner).

1. One specimen of Ham found to contain diplococci, streptococci, and staphylococci.
2. Do. Tripe do. colon bacilli and diplococci.
3. Do. Brawn do. streptococci and colon bacilli.

Disinfecting Department.—The work of this department is steadily growing, not so much through an increase of goods and premises disinfected for the acute specific and other infective diseases, as by new sections of work devolving upon the department under sanitary statutes, orders, and memoranda. At the present time the ordinary work of the department is divisible into the following classes:—

- (1) Steam disinfection of clothing, bedding, and other goods, to which such a method is legitimately applicable, in the steam disinfecting apparatus at the Eastcroft, and at the Isolation Hospital stations.
- (2) Disinfection by fumigation, washing, and steeping, in cases where steam is inapplicable, *e.g.*, for furs and other leather goods, felt hats, etc.
- (3) Disinfection and cleansing of persons by bathing and use of medicaments, *e.g.* in case of midwives in attendance on cases of puerperal sepsis, and school children and other persons affected with lice, scabies, etc.
- (4) Disinfection of dwelling-houses, schools, and other premises, by spraying, washing, and fumigation.
- (5) Exceptional disinfection, like that of public carriages, canal boats, stables, etc.

The amount of work is set out as far as possible in separate items in the accompanying table.

Articles Disinfected at the Public Stations in Nottingham, 1893-1908.

	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Bedding	8521	2943	10990	8822	4483	7550	22385	14582	12758	13002	13765	14391	11112	18970	12666	12801
Clothing	11266	20579	12652	9012	4768	5554	14605	10517	9403	3785	9707	9268	10527	9548	9634	9668
Furniture and Hangings	726	1541	1277	2184	1382	2130	2722	2397	3257	4455	2828	3145	2803	2842	3042	3718
Miscellaneous Articles ..	10573	10303	13272	8394	8341	7699	14093	9498	9410	11498	12204	10558	11447	16856	15709	18654
TOTAL	31086	35366	38191	28392	18974	22933	53805	36994	34828	32740	38504	37362	35889	48216	41051	44841

Houses Disinfected, 1903-08.

1903	1904	1905	1906	1907	1908
1977	1891	1243	1466	1075	1192

Persons Cleansed and Disinfected at Public Stations, 1908	..	..	..	..	60
School Premises Disinfected during 1908	..	..	..	..	15
Private Houses Disinfected and Cleansed for Phthisis during 1908	..	..	..	..	58

No charge is made for any of the work scheduled as falling within the province of the Department, but a nominal charge is made for such services as the destruction of moth, and other like domestic pests.

All articles disinfected at the disinfecting depôts are collected and returned by the department.

Separate baths and W.C.'s for the two sexes have been fitted up at the Eastcroft station, for the use of the somewhat heterogeneous class requiring personal disinfection or cleansing.

The very large proportion of children in our Public Elementary Schools, and of professional vagrants, who suffer from pediculosis, sufficiently indicate the necessity for an establishment of this character, without considering the large number of other persons, such as midwives and nurses who, by simple accident of their employment, may have become carriers of communicable disease.

The work of disinfection for goods and dwellings, done by this department, is growing in extent, and growing also in public estimation; not so much in favour perhaps as in toleration, being regarded as a necessary evil rather than a boon. Its one irremediable defect is that it almost necessarily involves in the majority of cases a certain amount of injury to the article or structure dealt with.

The superintendent of this department is Mr. Harry Ward, Cert. R. San. I., the Infectious Diseases Inspector. The total absence of friction between the department and the public during the past year, is sufficient evidence that the work has been tactfully done throughout this period.

The Mortuaries.—The bodies taken to the public mortuaries of the City numbered 250 in 1908, as compared with 256, 218, and 256 in the three preceding years, respectively.

Number of Bodies, Male and Female, taken into each of the
Public Mortuaries during each month of the year 1908.

MONTH.	LEEN SIDE.		HYSON GREEN.		BULWELL.		TOTAL PER MONTH.	
	Male Bodies.	Female Bodies.	Male Bodies.	Female Bodies.	Male Bodies.	Female Bodies.	Male Bodies.	Female Bodies.
JANUARY	7	15	5	3	..	..	12	18
FEBRUARY	9	4	8	3	2	..	19	7
MARCH	6	10	5	2	..	..	11	12
APRIL	4	4	4	9	..	..	8	13
MAY.. ..	6	3	..	2	..	..	6	5
JUNE	9	6	5	2	2	1	16	9
JULY	4	..	2	4	2	..	8	4
AUGUST	7	5	5	..	1	..	13	5
SEPTEMBER ..	10	5	1	3	1	..	12	8
OCTOBER	7	8	4	1	..	..	11	9
NOVEMBER.. ..	5	3	8	1	3	1	16	5
DECEMBER.. ..	2	7	9	5	..	..	11	12
	76	70	56	35	11	2	143	107

TOTAL, BOTH SEXES—250.

There is little to note about the large, fully equipped mortuaries at Hyson Green and Leen Side. The extent to which these are utilized from year to year necessarily varies only within narrow limits, as they serve the greater part of the town, and the demand for their accommodation is relatively uniform.

With regard to the Bulwell mortuary, however, I may point out that it is simply one of the out-buildings of the local police station, inexpensively fitted and adapted for the purpose, and that, as it was intended from the outset only for use in emergency, the small number of bodies taken to it need occasion no surprise or concern.

Public Lavatories.—There has been no alteration in the number and situation of these during the past year. The complete list is as follows:—

FOR MEN—Parliament Street (underground).

Milton Street „

Gedling Street.

Shambles.

Carrington Street Bridge.

Trent Bridge.

FOR WOMEN—Milton Street (underground).

Gedling Street.

Shambles.

Trent Bridge.

There is still marked irregularity and inequality in the amount of patronage extended to those outside the central business area of the City, but none has met with less appreciation than the pair for men and women at Trent Bridge.

The women's lavatory in the shambles, and the men's in Parliament Street, are still (as for many years past) very fully used, and the existing accommodation in both is frequently insufficient.

Common Lodging Houses.—At the close of 1908 there were 62 common lodging houses on the City Register, including the two which belong to and are managed by the Corporation. The number of these houses and the amount of accommodation provided by them is steadily increasing. The number of houses has advanced by 5 in the past 2 years, and by 2 in the last 12 months. The net increase in the number of available beds, as compared with last year, is 28, the total of these now standing at 1209, as compared with 1181 at the close of 1907. Thirty-two beds were actually added in the two new houses, but the use of 4 single beds in some of the old houses having been discontinued, the net annual increase was reduced to 28.

Common Lodging Houses. Situation:—

In Red Lion Street (and yards opening thereon)	45
" Millstone Lane	1
" Canal Street and Leen Side	4
" Main Street, Bulwell	2
" Portland Place, Coalpit Lane	1
" Water Street	1
" Washington Street	1
" North Church Street	1
" Popham Street	1
" Cherry Street	1
" Clare Street	1
" Peel Street	1
" Pear Street	1
" Mount Street, Angel Row	1
	62

The two new houses are both in Red Lion Street (Narrow Marsh), bringing the total number of houses situated either in, or in yards opening on, that thoroughfare, up to 45. I am strongly of opinion that the further concentration of these hostels in Narrow Marsh should be discouraged. The wanderers who constitute the bulk of their guests do less harm when

**Common Lodging Houses, Nottingham, 1908.
Accommodation Data.**

NUMBER OF HOUSES.					
	For Males only.	For Females only.	For both Sexes.	Total No. of Houses.	Total No. of Beds.
Houses ..	31	1	30	62	..
Beds ..	626	20	422	..	1,068

	No. of Houses.	BED ACCOMMODATION.						Registered amount of bed accommodation for lodgers.
		Less than 10 beds.	10 to 20.	21 to 30.	31 to 40.	41 to 50.	51 to 60.	
Houses on Register, 1907..	60	7	30	16	4	2	1	1,177
New Houses opened ..	2	..	1	1	..	..	..	32
Houses on Register at end of 1908	62	..	..	..	..	..	..	1,209

scattered than when herded together, and especially when the district in which they are herded is so morally insalubrious, apart from the common lodging houses, as Narrow Marsh.

In accordance with the provisions of the Public Health Act, 1875, all the registered houses were lime-washed or painted and thoroughly cleansed both in April and October.

In earlier reports I have criticised the two Corporation lodging houses (that for men in Popham Street with 28 beds, and that for women in North Church Street with 20 beds). I have pointed out that whereas these houses were originally intended to serve as hostels for respectable poor people in temporary need of such accommodation, and also as patterns, for other lodging house keepers, of all that these houses should be, they both of them fail to do either. As you have recently (in the current year) decided to close the women's house, I need only say of it, that, apart altogether from the class of women frequenting it, which were not those for whose benefit it was started, it has been losing way for years, and that the number of lodgers accommodated in 1908 was less than half the annual number of 10 years earlier (7,053 in 1899).

The men's house in Popham Street has failed, because, though clean and respectable, it is a bare and comfortless barrack in a mean side street. No money has been spent on it beyond what was necessary to keep it clean and habitable, and it has consequently been unable to compete successfully with more enterprising and business-like contemporaries. A house in a decent working-class neighbourhood, equipped and managed on the lines of the Rowton Houses and Church Army Homes, if established in Nottingham by the Corporation, would, I believe, prove a boon to the poor, and a commercial success.

Corporation Lodging Houses.

Situation of lodging-house.	No. of beds.	No. of Lodgers admitted in each of the years.									
		1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
Popham Street... (Men only).	28	6,722	7,965	8,262	9,282	9,194	8,821	8,798	8,754	7,833	7,096
Nth. Church St... Formerly Parliament St. (Women only).	20	7,053	*3,603	3,612	4,631	5,123	4,529	4,215	3,876	3,985	3,157
		13,845	11,568	11,874	13,913	14,317	13,350	13,013	12,621	11,818	10,253

* House closed July 14th to December 24th.

There should also be a new house for women similar to that for men; but I would recommend that the advice of a committee of ladies be sought in the management of this house, if it be established.

Mr. G. A. Read, Cert. R. San. I., continues to act in a very satisfactory manner as Inspector of Common Lodging Houses in this City.

Housing of the Working Classes Act, 1890.—Again I have to report that no formal action has been taken under the above Act during the past year. Several causes contributed to bring about this negative result. One Housing Committee of the Corporation had been appointed, and after making a very general survey of the slum areas of the City, had reserved its decision so far as this related to any definite line of action. It was, further, known that another special Housing Committee was about to be appointed (this Committee was appointed on January 4th, 1909, and at once began a systematic inspection of poor neighbourhoods, and instituted several housing reform operations which will form the subject of a special report for the current year). Under these circumstances, and in view of the fact that the new Housing and Town Planning Bill, associated with the name of the President of the Local Government Board, which, if it become law, will considerably increase the powers and responsibilities of Local Authorities, and the controlling power of the Local

Government Board over the latter, was still to come before Parliament, the Health Committee decided to confine its operations in this direction principally to the cleansing and repair of dirty and decayed dwellings, and their offices* under the Public Health Acts, and to ask for closure only in the case of houses the repair of which was practically impossible. A group of houses of the latter class, in 'Tilley's Yard, Drury Hill, were voluntarily closed by their owners on receipt of an informal intimation that their closure was desired by the Committee.

The houses cleansed and repaired during the year were 329 in number, as compared with 212 in 1907 (see table, page 161 post). In dealing with work of this last description, however, it is necessary to bear in mind that from the house-owner's, and even from the disinterested social-reformer's point of view, there is little permanent advantage to be looked for from such work in certain very poor neighbourhoods, unless it be accompanied by some ameliorating influence operating upon the people themselves, other than that exercised by the substitution of decent for squalid physical surroundings. There are, of course, numerous agencies now in operation for promoting self-improvement and self-help among the poor, but the majority of our poorest slum-dwellers are hardly touched by them, because a certain amount of spontaneous response on the part of the people themselves is usually called for as a necessary antecedent to the operation of such agencies, and such response is not forthcoming in the case of the social residuals to whom I refer. They must be saved, if saved at all, in spite of themselves, and the problem of devising a scheme or schemes for accomplishing their salvation, is one of the more peculiar difficulty in a country like ours, because the

* Special sets of scavengers are now regularly employed in cleansing courts, alleys, yards, and closets in the poorer districts of the City.

so-called liberty of the subject has become with us, whether rightly or wrongly, an article of political religion. There are many people who think that when liberty is translated in practice as licence to live a life of idleness and vice, and to produce and rear children to do the same, the State should have power to curtail the privilege of personal liberty so abused, but although public opinion is growing in favour of such curtailment, it appears to be scarcely ripe for action at present.

In my Report for 1907, I gave an analysis of the new Housing and Town Planning Bill, then and now under public consideration. I shall here, therefore, only mention some of its principal innovations. These are as follows :—

PART I.

The Local Government Board may, under conditions, make an order directing any defaulting authority to act under Part I. (dealing with areas), Part II. (dealing with single houses), and Part III. (dealing with the provision of working-class lodgings—and dwellings), Housing of the Working Classes Act, 1890.

Local Authorities may make closing orders in respect of unwholesome dwellings, without application to Justices, subject to appeal to Local Government Board.

Local Authorities may also, under conditions, at end of three months make demolition orders, subject to appeal to Local Government Board.

The Local Government Board may call for reports from Local Authorities upon congested districts.

The Local Government Board may order joint action of Local Authorities.

PART II.

A Town Planning scheme may be made in respect of any land likely to be used for building purposes, and “building purposes” may here include the provision of open spaces, parks, pleasure grounds, or recreation grounds, the decision of the Local Government Board as to what are, and are not “building purposes” to be final.

The Local Government Board may make or execute a Town Planning Scheme should a Local Authority fail to do so when required.

The Notification of Births Act, and “The Mothers’ and Babies’ Welcome,” in Howard Street, Glasshouse Street.—The Notification of Births Act was adopted in Nottingham by resolution of the City Council, dated April 6th, 1908, and, after the completion of necessary preliminaries, came into operation on May 9th, 1908. The object of the measure is to bring to the knowledge of the Medical Officer of Health, immediately after its occurrence, each birth taking place within his district, in order that he may have opportunity of advising, instructing, and assisting recent mothers in poor circumstances with respect to the proper care and management of their own and their infant’s health, from the date of birth onwards, in all cases where such advice and assistance would not otherwise be available. The operation of the measure in this City has been remarkably successful from the very beginning. Miss Winifred Hudston, a lady with experience in nursing, and holding the Certificate of the Royal Sanitary Institute as an Inspector of Nuisances, and who received her training in our own department, was appointed to act as Visitor and Inspector under the Act, and commenced her duties on July 6th, 1908.

Some misgivings were felt by certain medical men in this City, as elsewhere in the country, lest compliance with the provisions of the Act on their part should disturb the confidential relations ordinarily subsisting between themselves and their patients, but these evil anticipations have not been justified by subsequent experience since the Act has been in force. No less than 73 per cent. of all the births which occurred in the City between the date at which it came into operation, and the close of the year, were promptly notified, but in no single instance has the slightest unpleasantness been experienced in connection with the notifications, or the subsequent visits of the Inspector, if we except the rudeness of drunken husbands to the latter on two occasions.

The Act, of course, requires the early notification of all births, but a complete return was hardly to be looked for at the outset; and having had prompt and proper notice of practically all those occurring among the class or classes in which our ministrations were likely to be well received, and most useful in their effects, we have not thought it desirable, for the present at any rate, to trouble about the rest in respect of which default has been made.

The Register of Notifications has been entered up daily, and is open for inspection in the office of the Health Department.

Miss Hudston has visited 1,507 selected cases, and has interviewed 1,192 mothers. Of these 1,007 promised or professed to feed their infants entirely at the breast, 92 for various reasons fed them almost from the commencement entirely by hand, and 67 partly at the breast and partly by hand. Twenty-six of the babies died before the Inspector's visit. In 98 instances, the mothers went to work-places away from their homes, as soon as they were legally and physically able to do so.

I have already mentioned the voluntary establishment of "The Mothers' and Babies' Welcome" on premises in Howard Street, originally loaned to the Social Guild Institution by the Corporation. The "Welcome" is under the management of a committee of local ladies and gentlemen, with the Duchess of Portland as President, and Mrs. Macdonald, of Tollerton, as Chairman of Committee. In order to explain its function, and the correlation of the latter to the work done and attempted under the Notification of Births Act, I cannot do better than quote certain extracts from the Annual Report of the "Welcome," including a portion contributed by myself at the request of the Committee, of which I am a member.

EXTRACTS FROM REPORT OF "MOTHERS' AND BABIES' WELCOME."

"The Nottingham Mothers' and Babies' Welcome first came into being in July, 1908. Its object is to reduce the excessive infant mortality in the Town of Nottingham, and to improve the general health and stamina of the mothers.

"The Committee received considerable financial support from the County, and also obtained, in February, 1909, a grant from the Estates Committee of the Corporation for the enlarging of the premises in Howard Street, where, by the kindness of the Social Guild, the 'Welcome' had made its initial experiment. These premises include a dining-room, kitchen, nursery, consulting room, Superintendent's room, two caretaker's rooms, and two offices.

"The scheme of the 'Welcome' may be briefly outlined as follows :—

1. Dinners are provided at a minimum cost to expectant and nursing mothers. This plan, as well as greatly improving the mother's health and chances of feeding her baby herself, serves also as a practical demonstration of a suitable economical dietry.
2. Babies are weighed fortnightly, and a staff of eight doctors take it in turn to attend daily at the 'Welcome,' to give advice on diet, etc.
3. Afternoon classes for knitting are held by the Superintendent, and mothers are taught how to cut out and make children's clothes.

4. The Superintendent visits the mothers in their own homes, and so keeps in touch with every woman on the books.
5. A Provident Maternity Club has been started.

“The success which has attended these efforts is most encouraging. There are now over 200 women on the books, who attend as regularly as they can, and appear to derive both physical and moral good from the Institution.

“Dr. Boobyer, the Medical Officer of Health for Nottingham, reports that the ‘Welcome,’ working in conjunction with the Notification of Births Act, is doing good and necessary work. The question of finance has so far not interfered with the satisfactory working of the scheme. Donations and special efforts have assured the ‘Welcome’s’ existence for at least a year, but if the work is to be continued, and if it is to be extended to other districts, it will be necessary to enlist the sympathy of regular subscribers. The cost for one year is about £200, but the aim and object of the promoters is to have one centre with several branches. It is impossible for women living in Radford, Carrington, New Basford, the Meadows, etc., to come daily to Howard Street, yet they struggle to come, because they love it. They call it ‘Home,’ and the ‘Mother’s Comfort.’ May we appeal to the generosity of our friends to enable us to put these aids to healthy babyhood a little nearer the hands that are stretched out so eagerly towards them? An assured income of £300 or £400 would enable us, we venture to say, to lower the infant mortality in Nottingham (now 145 per 1,000 births) very considerably.”

NOTE BY DR. BOOBYER.

“An Institution like the ‘Mothers’ and Babies’ Welcome’ is an almost necessary adjunct or complement to any scheme of social reform among the poor. The Notification of Births Act could not be of any practical utility without such a local centre as the ‘Welcome’ affords for the instruction and assistance of ignorant and necessitous young mothers, whose cases come to the knowledge of the Local Authority through the operation of the Act. Without the ‘Welcome’ we should have to rely solely upon influence exerted by our special Inspectors in the homes, chiefly by the aid of oral and printed instruction; and such ministration, we know, however thorough, and painstaking, and conscientious it may be, bears usually very little tangible fruit. In the ‘Welcome’ the women learn in the best of all ways, by observation and experience, the truth of principles they would otherwise be unable to grasp. A good example is set them in various matters coming within their daily domestic experience, and such example is not only valuable to the baby and the mother, but affects also the whole domestic establishment.

“Centres of this character are invaluable aids to housing reform, for very many of the ills from which the poor suffer in our City slums are the direct outcome of their own ignorance, incapacity, or active vice. Effective teaching must go hand in hand with the provision of better houses and other physical reforms, if the poor are to benefit to any considerable extent, and in a permanent manner, from these reforms. The good fruits of such teaching and demonstrations as the ‘Welcome’ provides, are to be found in many poor neighbourhoods throughout the City; and during recent inspections by the Housing Committee of the Corporation, we have often found houses in poor streets, looking bright, and clean, and wholesome, while all around them was wretchedness and squalor. Some good influence has been at work in these cases, to show what intelligence, thrift, and courage can accomplish under discouraging circumstances. Let such evidence of a desire for better things on the part of the poor encourage us to persevere with our schemes of social improvement among them.

“I shall not weary you with a lengthened statistical statement on the present occasion, but may fitly give a few salient figures, principally to remind you of the need of such an effort as this ‘Welcome’ scheme embodies.

“The number of infants under 12 months per 1,000 born who have died annually during the past ten years in the City of Nottingham has ranged from 210 in 1899, to 145 in 1908. This last number is the lowest on record. If nothing more, it is at least a happy fortuity that the infant mortality should have been lower in the first year of the ‘Welcome’s’ existence than in any previous year on record. It is commonly held that a rate of 80 deaths under one year per 1,000 births represents the lowest attainable urban figure under existing conditions. If we bear this figure in mind, we can estimate at once the magnitude of our preventive and conservative task, and the measure of success which crowns our efforts from time to time.

“One of the principal contributors to the infantile death-rate is epidemic diarrhoea. The annual deaths from this cause in Nottingham have ranged in recent times from 600 in 1899 to 166 in 1903. The total for 1908 was 171—only five above the latter minimal figure. During 1899, more than 400 of the deaths occurred between the middle of July and the end of September. The hand-fed children of the poor constitute the great majority of the victims, and this, of course, is one of the strongest and justest of our stock arguments with working women in favour of breast-feeding.

“I must add a few words to what Mrs. Macdonald has already so admirably said with respect to the necessity for other ‘Welcome’ centres in the outlying poor neighbourhoods of the City. We ought

not to rest content until we have secured the establishment of three further centres, viz. : One for Sneinton, one for Radford and Basford, and one for Bulwell. With these and the headquarters at Howard Street in full work, I would not hesitate for a moment to apply the statistical test to our preventive enterprise, being confident that such a test would reveal a result entirely justifying the expenditure of time, and money, and energy which has been incurred.

“It may interest and encourage the Committee of the ‘Welcome’ to know that the following 15 places have already either established institutions of this character, or are about to do so. I give the title of each institution with the name of the place :—

Birmingham—Infants’ Health Society,
 Manchester—Mothers’ Guild,
 Aberdeen—Aberdeen School for Mothers,
 Newcastle-on-Tyne—Mothers’ and Babies’ Welcome,
 Fulham—School for Mothers,
 Rotherhithe—Bermondsey Settlement,
 Poplar—Weighing Centres,
 Stepney—School for Mothers,
 Canning Town—School for Mothers,
 Cork—School for Mothers,
 Bolton—Babies’ Welcome,
 Wimbledon—Consultations,
 Lewisham—School for Mothers,

and last, but not least, St. Pancras, under the same title.

“(Signed) PHILIP BOOBBYER.”

The Midwives Act, 1902.—The certified midwives resident in Nottingham at the present time (*i.e.*, the close of 1908) number 67, and 40 of these are engaged in the practice of midwifery.

The administration of this Act in the City of Nottingham is still very effectively carried out, with Miss Kate Steen as Inspector of Midwives for the whole area. This lady reports that she has paid 382 visits to midwives, and 515 visits to their patients during 1908. The number of midwifery cases attended by these women is returned as 3,304. Medical men appear to have been sent for when necessary. There were six deaths of infants before the arrival of medical assistance, but

none of mothers. The cases in which the midwives have sent for qualified medical aid, and subsequently reported such action to me, in accordance with the Rules, have numbered 300. The instances in which they have called for such assistance without reporting the fact have been 28 in number. The notifications of still births received at the Health Department (from midwives) during the year numbered 117. The cases of puerperal septicæmia attended by midwives during the year are returned as 11, three ending fatally. Five midwives were reported to the Local Supervising Authority, for serious breaches of the Central Midwives Board Rules. Three were cautioned by the Local Supervising Authority, and two were reported by the latter to the Central Midwives Board, who placed them under supervision for periods of three and six months respectively.

The Local Supervising Authority is required by Section 8 of the Act to forward, in January of each year, to the Central Midwives Board, the names and addresses of all midwives who—also in accordance with the provisions of the Act—have notified the Local Supervising Authority during the previous year of their intention to practice within the Authority's area. This requirement of the Act was duly complied with in January.

A copy of the Midwives Roll for the current year, as further required under Sec. 8 of the Act, is kept in the Health Department at the Guildhall.

I regret to have to report that there is likely to be a serious shortage of midwives in this City—as in many other places—after April 1st, 1910, when it will no longer be lawful for any uncertified woman to practice midwifery. In my opinion the time has arrived for the establishment in Nottingham of a small central Maternity Hospital, with a Home Midwifery Department attached. Such a hospital would serve a double purpose. It would be a boon to many poor mothers,

and the means of saving many lives now lost for lack of proper care and attention. It would also serve as an excellent school for midwives.

Canal Boats Acts, 1877 to 1884; and Regulations, 1878.—Mr. F. W. Franks, Cert. R. San. I., Chief Clerk of the Health Department and Inspector of Canal Boats for Nottingham, reports that he has inspected 131 of these boats in the course of 80 special visits to the canals and other like waters during 1908. The Acts require that the official visits shall be paid between the hours of 6 a.m. and 9 p.m., and the Inspector's visits have been paid between these hours on each occasion. The visits have been at short but irregular intervals. The reception accorded the Inspector has been satisfactory, he has been allowed to make a complete inspection when necessary, and all his inquiries have been freely and to all appearance truthfully answered in every instance. The number of women carried on the boats was 16—the same as in 1907, the number of children under five years, 3, and the number of those between five and twelve years, 4. Two minor offences only under the Acts and Regulations were discovered. These were, the failure in one instance to re-paint the interior of a cabin; and the use, in another, of a defective vessel for containing water. Both defects were promptly rectified by the owners on receipt of appropriate notice. No case of infectious disease was reported as having existed or occurred upon any boat passing through Nottingham during the year, nor was it necessary to cleanse or disinfect any one of them. There are now 157 boats on the City Register, one new vessel having been added during 1908.

Factory and Workshop Acts, 1891–1901.—On pp. 158 to 160 of this Report will be found tables drawn up in the form approved by the Secretary of State for the Home Department, setting out, for the year 1908, the inspections made, notices issued, and

defects found and remedied by officers of the Local Authority, particulars of home-work and outworkers, and of lists of these received from employers (Sec. 107), of inspections of outworkers' premises, of outwork found on unwholesome and infected premises (Secs. 108–110), and of action taken to prevent its issue to such premises (Secs. 109–110), the number of workshops on the local register (Sec. 131), matters notified by the Local Authority to His Majesty's Inspector (Sec. 133) and *vice versâ*, and underground bakehouses in use at the end of the year (Sec. 101).

I regret to say that the lists of outworkers, both as regards contractors and workpeople, are incomplete in almost every instance. The small irregular contractor is the principal source of error. This person (usually a woman) has irregular employment only herself, and necessarily gives employment of the same order only to others. These casuals are probably more numerous in Nottingham than elsewhere, on account of the frequent and extensive fluctuations in the staple local industry—the lace trade. But even if the lists were all complete, and sent in spontaneously and punctually—which is seldom the case—it would be quite impossible for Miss Sophie Buckoll, the only local lady inspector of factories and workshops, upon whom devolves the duty of visiting all workplaces where females are employed, to inspect all the outwork premises of the City in the course of the year. Fortunately, there is a large amount of more or less incidental inspection of outworkers' premises continuously going on through visits paid to the latter by other special and general inspecting officers of the Health Department. The District Inspectors of Nuisances, the Infectious Diseases Inspectors, the (Lady) Inspector of Midwives, and the (Lady) Inspector under the Notification of Births Act, are the principal of these. Moreover, under the system of notification for infectious diseases, almost all cases of dangerous infectious disease come to our knowledge, and we are thus able to stop outwork on

infected premises, and secure the disinfection of outwork material which has been exposed to infection before its return to the business house from which it originally came. In this connection I may mention that the Health Department have had frequent occasion to acknowledge the generous, public spirited action of local firms, in practically sacrificing large quantities of valuable finished material, by submitting it to radical disinfection, rather than run the slightest risk of allowing the spread of infection by its agency.

In view of the sensational statements recently repeated in the public press respecting the poverty and wretchedness, the illegal employment of children, and other abuses existent on many outworkers' premises, it may be well for me to add a few words on the subject. I may say at once that there is an element of truth in these statements. The error lies in stating that to be general or universal which is only particular or exceptional. Undoubtedly some contractors do sublet their work to very poor people indeed, and when other employment is scarce, there is much competition for work of this character; and again, when a particular piece of work is being pushed by the contractor or the firm, the children, and any one else who happens to be in the house, will help to get it done; but it is certainly a gross exaggeration to say that children are regularly employed on an extensive scale upon lace or hosiery outwork in this City.

Mr. Flint and Miss Buckoll, the two local inspectors in this sub-department, are capable and industrious officials, but it is quite impossible for them to cover effectively all the ground the local inspectorial staff is theoretically required to cover under the Factory and Workshops Acts in a City like Nottingham; and this is the more emphatically true in the Lady Inspector's case, on account of the huge number of female outworkers' premises requiring continual supervision.

Shop Hours Acts, 1892 to 1895.—

It is still, as heretofore, extremely difficult to obtain legal proof that young persons (under 18 years) are employed in any retail or wholesale shops, markets, stalls, or warehouses, including public-houses and refreshment-houses, for a longer period than 74 hours, including meal-times, in any one week (which is forbidden by these Acts), although allegations of such employment are frequently made. However, the provisions of the Acts are now for the most part well known, alike to employers and employed, and the official notice which is required to be posted up in all places coming within the operation of the Acts, is a very effective means of informing and reminding them of these provisions. The notice is re-produced, as usual, in the Appendix of this Report.

Diseases of Animals Act, 1894. Orders, Regulations, etc., of the Board of Agriculture.—No less than 43 cases of reputed swine fever were notified to the Health Department, and through the latter, in turn, to the Board of Agriculture during 1908, but in only one of these cases was the diagnosis confirmed on post-mortem examination. No case of any of the other scheduled diseases was reported during the year.

The general Swine Fever (Regulation of Movement) Order of 1908, repealing the Swine Fever (Regulation of Movement) Order of 1903, came into force on June 1st, of 1908, and continued in operation till the close of the year. The general effect of the Order is similar to that of 1903.

The Nottingham Allotment Gardens (Swine Fever) Order of January 7th, 1904 (affecting the Mill-in-the-Hole Allotment Gardens) is not repealed by the new Order.

The Sheep-Dipping (England) Order of 1908, was operative in Nottingham from July 14th to August 31st, inclusive. It provides for the dipping of practically all sheep in the Dipping Area at any time between the 14th July and the 31st of August, inclusive—but there are certain exceptions. Special provisions (Article 19) are made for the introduction, at the discretion of the Local Authority, of lambs, without dipping, but as it is impossible to guarantee that all lambs brought to the market shall be slaughtered immediately after leaving it, and as there is at the Market no means of separating dipped and undipped animals, the Local Authority have thought it advisable not to admit lambs unless they have been previously dipped.

The Dairies, Cowsheds, & Milkshops Orders, 1885 to 1899.—There are now 871 names on the City Register of Milksellers, and 125 were added during 1908. But there must necessarily remain on the Register from year to year many names of persons who have given up business, as such people seldom notify us of their discontinuance, and we cannot always discover the fact at once for ourselves. Although the Local Authority must register any person as a milkseller on request, they are not bound to approve of all premises proposed for use as dairies, cowsheds, and milkshops; and during 1908, as in previous years, the special officer (now Inspector J. A. Sutton, Cert. R. San. I.) has at once inspected and reported upon the proposed premises whenever a fresh applicant for registration has appeared. As a result of these inspections, five applicants for registration at once withdrew their names, being convinced on the inspector's representation, of the total unfitness of their premises for the proposed business. Three others, also, having commenced business, subsequently abandoned

it voluntarily on similar grounds. In 35 instances notices were served for the alteration of the premises, repair of defective utensils, etc., and these were all complied with.

In addition to the inspection of new premises, a regular and systematic supervision is exercised over the dairies, cowsheds, and milkshops of the City.

The Regulations affecting the maintenance, lighting, ventilation, and cleansing of dairies and cowsheds, the cleansing of utensils, and the storage of milk are very specially enforced. Unfortunately, however, it is not possible to stop the storage and sale of milk upon all unsuitable premises—such, for example, as small general shops—but as far as practicable the keeping and sale of milk within the City boundaries is confined to premises specially devoted to the purpose.

The number of cowkeepers on the Nottingham Register is now 58, 4 persons having given up the business during 1908, and 2 established themselves in it anew. There are some 829 dairy cows in all throughout the City. The number of these is steadily growing, while the number of cowkeepers is shrinking. Every cowshed in the City is visited at least once a month by Inspector Sutton, and many much more frequently.

The general condition of the City cowsheds has greatly improved in recent years, but while many are models of all that such places should be, others are examples of the opposite.

Every animal in the City cowsheds is examined from time to time, and special attention is given to the udders. Whenever necessary the inspector is accompanied by a veterinary surgeon.

The following is a list of cases in which microscopic and bacterial examination was made during 1908, with the result of the examination in each case:—

Bacteriological Examination of Milk taken from suspected Cows.

No.	Result of Examination.						Action taken.
1	Tubercle bacilli	not found	..	..	..	..	—
2	Ditto	ditto	..	..	..	..	—
3	Ditto	ditto	..	..	..	..	—
4	Ditto	ditto	..	..	..	..	—
5	Ditto	ditto	..	..	..	..	—
6	Tubercle bacilli present, also large quantity of pus						.. Animal destroyed.
7	Tubercle bacilli suspected, also large quantity of pus						.. Animal dried off.
8	Suspicious	.. ..	..	..	..	..	—
9	Tubercle bacilli	not found	..	..	..	..	—
10	Ditto	ditto	..	..	..	..	—
11	Large quantity of blood present						.. Animal dried off.
12	Tubercle bacilli not found, quantity of pus & Staphylococci						Milk destroyed.
13	Tubercle bacilli	not found	..	..	..	..	—
14	Pus in small quantity..						.. Milk destroyed.
15	Tubercle bacilli	not found	..	..	..	..	—
16	Ditto	ditto	..	..	..	..	—
17	Ditto	ditto	..	..	..	..	—
18	Tubercle bacilli present, and small quantity of pus						.. Animal destroyed.
19	Tubercle bacilli	not found	..	..	..	..	—
20	Small quantity of pus..						.. Milk destroyed.
21	Ditto	ditto	..	..	..	..	Ditto
22	Large	ditto	..	..	..	..	Ditto
23	Ditto	ditto	..	..	..	..	Ditto
24	Ditto	ditto	..	..	..	..	Ditto
25	Milk drawn from separate teats of same cow.						Catarrhal inflammatory products. Animal dried off.
26							
27							

By the Tuberculosis Order of 1909, which will come into operation on the 1st of January, 1910, it is provided that:—

Every person who has in his possession or under his charge—

(1) any cow which is, or appears to be, suffering from tuberculosis of the udder, indurated udder, or other chronic disease of the udder; or

(2) any bovine animal which is, or appears to be emaciated from tuberculosis;

shall without avoidable delay give information of the fact to a constable or inspector of the Local Authority.

Further provision is made for veterinary inspection on behalf of the Local Authority, and for slaughter and compensation, with certain reservations and exceptions.

The Local Government Board and the Board of Agriculture and Fisheries have now, each in its own special province, decided to take vigorous action to prevent the spread of tuberculosis among men and animals, and this Order must therefore be taken as a limited definition of a preventive policy and practice which will ultimately be extended over a far wider field.

Slaughter-Houses.—The slaughter-houses of the City now number 155, two new ones, in Mount Street, New Basford, and in Bradford Street, Bulwell, respectively, having been opened under annual permits during 1908.

For some years it has been the practice of the City Council to discourage the erection of private slaughter houses, in order to hasten the development of a central abattoir scheme for the City, and insure its success when developed. I would again recommend that such a scheme be commenced, as originally projected, at some site near the Cattle Market and Midland Railway Station, upon such a commencing scale as to provide only for the current needs of the trade in the way of new slaughter-house accommodation, but with such arrangement of site and buildings as to allow of extension from time to time to meet growing requirements.

Many of the existing private slaughter-houses are serious nuisances to the neighbourhoods in which they are placed, and in the light of a recent decision of the High Court, it would appear that many of them could

be closed without much difficulty or expense. The following quotation from my own Report of last year sufficiently explains this decision :—

“A recent decision of the High Court makes it clear that slaughter-house licenses granted under the provisions of the Towns Improvement Clauses Act of 1847, Sections 125 to 130 of which are incorporated in the Public Health Act of 1875 by virtue of Section 169, are personal and temporary licenses, continuing in force only during the life (or occupancy) of the original licensees. The Act of 1875 repealed the Local Government Act of 1858, and directly incorporated the original provisions of the 1847 Act as to slaughter-houses. Under the above decision a large number of the slaughter-houses now in use as such in Nottingham are, without doubt, unlawfully used.”

Lethal Chamber for Dogs, Cats, &c., at the Eastcroft Sanitary Depôt.—This lethal chamber, in which dogs, cats, and other small animals are painlessly killed, by placing them in a wire cage and lowering the cage containing them into an atmosphere of chloroform vapour and carbonic acid gas, is still managed by the Health Department on behalf of the Watch Committee. The chamber is usually worked only on Monday and Friday afternoons, but it is also operated at other times when the number of animals awaiting destruction is sufficiently large. Persons interested in animals sent down for destruction are invited to witness the operation, which is altogether free from offensive features. The animals on entering the lethal atmosphere appear to fall suddenly asleep.

The number of animals destroyed during 1908 was slightly below the totals for 1905 and 1907, but otherwise larger than in any other year since the chamber was built. The dogs (1,435) were less numerous than in the three immediately preceding years, but the cats (614) were considerably more numerous. The numbers of animals destroyed in this chamber during each year since the opening in 1898 have been as follows :—

	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Dogs ..	422	472	731	770	856	1073	1325	1507	1448	1531	1435
Cats ..	64	108	180	297	371	455	735	548	428	531	614

2 monkeys, 3 rabbits, and 4 birds also destroyed during 1905.

Offensive Trades.—Three applications were received by the Local Authority during 1908, for their consent to the establishment of offensive trades. The first was in respect of a proposed tripe-boiling business at 229, St. Ann's Well Road. This was refused. The second was for a Hide and Skin Dépôt in Hermit Street. No objection was raised here, provided the requirements of the City Engineer and myself in the way of alteration to existing buildings were complied with. These requirements were not complied with, and the business has not been established. The third application was for a proposed rag and bone business at 2, Livingstone Terrace, Bunbury Street. This was granted. Trades of this description should never be sanctioned in dense neighbourhoods. They are a fruitful source of nuisance, and also in many instances of danger to health. They would not be tolerated by the rich ; they should not be thrust upon the poor.

Unwholesome Foods.—The following lists of unwholesome food-stuffs seized or surrendered during the past year are self-descriptive, the kind and amount of each being given. A large part of the butchers' meat is condemned for intrinsic unwholesomeness, like tuberculosis or other disease of the animals which yield it, but most of the other rejected food is wasted for lack of good management on the part of those who have the handling of it between the producers and the private consumers.

The amounts vary too much with variations in weather conditions, and other numerous accidental circumstances, to allow of a fair comparison of one season with another, but, speaking generally, it may be said that with us at any rate the weather factor is predominant, and taking two fairly similar years from a weather standpoint, like 1907 and 1908, the total weights of fresh foods of various kinds rejected and destroyed in each will be more or less similar.

Messrs. Samuel Billington, Cert. R. San. I., and H. T. Moore, have been indefatigable during the past year in their efforts to cover the large area over which their inspecting jurisdiction extends, but it is quite impossible for them to do this in a thoroughly effective manner without assistance.

BUTCHERS' MEAT.

DESCRIPTION.							Weight.	
							Imp. Stones.	lbs.
Beef	..	..	..	..	..	..	7881	3
Viscera	..	..	..	..	..	..	2424	10
Mutton	..	..	..	..	..	..	84	1
Pork	..	..	..	..	..	..	785	10
Veal	..	..	..	..	..	..	182	11
Lamb	..	..	..	..	..	..	3	8
Tripe	..	..	..	..	..	..	18	7
Sausages	..	..	..	..	..	..	2	12
Total	..	..	..	..	..	..	11383	6

GAME, &c.

	Stones.	lbs.
Rabbits	844	7
Hares	86	7
Rooks	11	7
Ptarmigan	2	0
Pheasants	0	3½
	944	10½

POULTRY.

	Stones.	lbs.
Geese	40	0
Chickens	37	3½
Turkeys	28	10½
Ducks	19	3½
Pigeons	6	0
	131	3½

WET FISH.

Hake	2151	3½
Coalfish	1296	0
Cod	1147	10½
Herrings	1074	0
Sprag	781	7
Mackerel	430	0
Codling	406	3½
Whiting	326	7
Ling	223	3½
Halibut	207	10½
Sprats	172	0
Haddock	138	10½
Roes	109	0
Sea Bream	76	7
Mixed Fish	71	0
Soles	70	10½

WET FISH—continued.

	Stones.	lbs.
Plaice	62	0
Dabs	58	0
Skate	52	10½
Lemon Soles	47	7
Smelts	36	0
Catfish	34	7
Conger Eel	18	7
Pollock	13	7
Trout	12	10½
Megrims	12	3½
Salmon	12	0
Turbot	6	0
Brill	3	7
Grilse	3	0
Fish Chitterling	1	7
John Dory	0	7
Slip Soles	0	3½
	9057	3½

SHELL FISH.

Mussels	4035	0
Shrimps	641	0
Whelks	377	0
Crabs	221	7
Oysters	179	0
Cockles	141	0
Prawns	119	7
Crayfish	57	0
Lobster-prawns	12	0
Lobsters	5	3½
	5788	3½

DRY FISH.

			Stones.	lbs.
Kippers .. ..	..	..	868	7
Finnies .. ..	..	..	403	0
Bloaters .. ..	..	..	300	10½
Fillets .. ..	..	..	173	7
Red Herrings ..	..	..	27	0
Salmon .. ..	..	..	12	0
Sprats .. ..	..	..	2	0
			<hr/> 1786	<hr/> 10½

FRUIT.

Apples .. ..	..	..	325	0
Pears .. ..	..	..	68	0
Bananas .. ..	..	..	64	0
Melons .. ..	..	..	64	0
Cherries .. ..	..	..	36	0
Raspberries ..	..	..	34	0
Strawberries ..	..	..	33	7
Rhubarb .. ..	..	..	28	0
Cocoa Nuts ..	..	..	22	0
Lemons .. ..	..	..	20	0
Gooseberries ..	..	..	18	0
Blackberries ..	..	..	14	0
Chestnuts .. ..	..	..	3	0
Plums .. ..	..	..	2	0
			<hr/> 731	<hr/> 7

VEGETABLES.

Carrots .. ..	..	..	1534	0
Potatoes .. ..	..	..	1526	0
Celery .. ..	..	..	1176	0
Parsnips .. ..	..	..	1062	0
Onions .. ..	..	..	904	0
Turnips .. ..	..	..	710	0
Cabbage .. ..	..	..	628	0
Kidney Beans ..	..	..	553	7
Parsley .. ..	..	..	251	0
Tomatocs .. ..	..	..	176	0
Vegetable Marrows	..	..	162	0
Brussels Sprouts	..	..	60	0
Radishes .. ..	..	..	56	0
Lettuces .. ..	..	..	52	0

VEGETABLES—continued.

			Stones.	lbs.
Horse Radish ..	..	..	48	0
Cauliflower ..	..	..	34	0
Asparagus ..	..	..	24	0
Broccoli .. ..	..	..	16	0
Cucumbers .. ..	..	..	16	0
Watercress .. ..	..	..	15	0
			<hr/> 9003	<hr/> 7

TINNED GOODS.

Tomatocs .. ..	..	..	1338	0
Milk .. ..	..	..	376	3½
Pineapple .. ..	..	..	263	3½
Beef .. ..	..	..	216	3½
Apricots .. ..	..	..	111	10½
Salmon .. ..	..	..	104	7
Lobster .. ..	..	..	94	7
Pears .. ..	..	..	80	3½
Tongue .. ..	..	..	60	10½
Sardines .. ..	..	..	37	3½
Peaches .. ..	..	..	25	7
Plums .. ..	..	..	25	3½
Black Currants ..	..	..	21	7
Mutton .. ..	..	..	13	7
Apples .. ..	..	..	13	0
Damsons .. ..	..	..	13	0
Rabbit .. ..	..	..	12	7
Raspberries .. ..	..	..	8	7
Strawberries ..	..	..	5	7
Cherries .. ..	..	..	5	0
Potted Shrimps ..	..	..	5	0
Herrings .. ..	..	..	2	7
Brawn .. ..	..	..	2	0
Gooseberries ..	..	..	1	7
			<hr/> 2837	<hr/> 7

MISCELLANEOUS.

Eggs .. ..	..	..	162	7
Cheese .. ..	..	..	37	0
Pickled Cabbage ..	..	..	0	1
			<hr/> 199	<hr/> 8

Sale of Food and Drugs Acts, 1875 to 1899. Adulterations and Abstractions.

—The samples officially taken under these Acts during 1908, and sent to Mr. S. R. Trotman, the City Analyst, for examination, was 600, as against 606, 600, and 604, respectively, in the three immediately preceding years—the number having been fixed at (or about) this figure by a decision of the Health Committee. Of these 600 samples, 471, or 78·5 per cent., were declared to be

satisfactory, *i.e.*, practically pure or genuine. The corresponding proportions in the three preceding years were, 81·5 per cent., 80 per cent., and 88 per cent.

An account of the proceedings taken in respect of offences under these Acts will be found under the heading of prosecutions.

	No. of Samples.	No. Pure.	No. Deficient or Adulterated.		
			Deficient in Fat.	Added Water.	
Milk, New ..	291	.. 246	..	..	..
			1. 21%	1. 19%	
			1. 19%	1. 13½%	
			1. 15%	1. 12%	
			1. 13%	2. 11%	
			1. 10%	1. 10½%	
			1. 8½%	1. 8½%	
			2. 8%	3. 8%	
			2. 7%	1. 7%	
			2. 6½%	3. 5%	
			3. 6%	2. 3%	
			4. 5%	8. 2%	
			1. 4½%		
			1. 4%	24	
			2. 3%		
			1. 2½%		
			24		
Milk, Separated	1	.. 1	..	..	Pure.
Milk, Condensed					
(Machine					
Skimmed)	6	.. 6	..	..	All Pure.
Cream ..	.. 11	.. 2	..	..	1. 29 grs. per lb.
					2. 28 " "
					2. 21 " "
					1. 20 " "
					1. 14·5 " "
					1. 10·5 " "
					1. 7·7 " "
				9	
			With	With	With added
			Boric Acid.	Foreign Fat.	Water.
Butter ..	.. 68	.. 48	1. 0·35%	10. 90%	1. 6·13%
			1. 0·26%		1. 3%
			1. 0·25%		
			4. A trace.		2
			7	Excess of Curd and Water.	1.
					With Boric Acid.
Butter Substitute	2	.. —	..	..	1. 0·48%
					1. 0·14%
					2
					With Foreign Fat.
Butter, Nut					
Cream ..	2	.. —	..	..	2. 90%

	No. of Samples.	No. Pure.	No. Deficient or Adulterated.					
Margarine	.. 8	.. 8	..	..	..	..	..	} All Pure.
Dripping	.. 2	.. 2	..	..	..	..	..
Lard ..	.. 4	.. 4	..	..	..	..	..
Deficient in Fat. Skimmed Milk.								
Cheese ..	.. 15	.. 11	..	1. 50%	..	2.		
				1. 39%				
				2				
Bread ..	.. 8	.. 6	..	..	..	..	..	With excess Water.
								2.
Mince Meat	.. 2	.. —	..	..	..	..	..	With salicylic acid.
								1. 3·5 grs. per lb.
								1. 1·5 „ „
								2
								With Boric Acid.
Lemon Curd	3	.. 2	..	..	..	..	..	1. 0·24%
Honey ..	.. 1	.. 1	..	..	..	..	..	Pure.
Treacle ..	.. 4	.. 4	..	..	..	..	..	All Pure.
White crystals coloured with caramel.								
Demerara Sugar	2	.. 1	..	..	..	..	..	1.
Artificially coloured.								
Red Plum Jam	1	.. —	..	..	..	..	..	1.
Mixed Fruit Jam	1	.. 1	..	..	..	..	..	Pure.
Sausages	.. 7	.. —	..	..	..	..	..	1. 19·6 grs. per lb.
								1. 17·5 „ „
								1. 14 „ „
								1. 10·5 „ „
								2. 10 „ „
								1. A trace.
								7
Potted Meat	.. 3	.. —	..	..	..	..	..	1. 26 grs. per lb.
								1. 17·9 „ „
								1. 13·3 „ „
								3
Tripe ..	.. 4	.. 2	..	..	..	..	..	1. 51·8 grs. per lb.
								1. 14·7 „ „
								2
Potted Shrimps	1	.. —	..	..	..	..	..	1. 19·06 „ „
Potted Lobster	4	.. 1	..	..	..	..	..	1. 14·52 „ „
								1. 7·00 „ „
								1. A trace.
								3
Arrowroot	.. 9	.. 9	..	..	..	..	..	} All Pure.
Oatmeal	.. 3	.. 3	..	..	..	..	..
Tea ..	.. 2	.. 2	..	..	..	..	..
With Chicory.								
Coffee ..	.. 16	.. 15	..	..	..	..	..	1. 75%
Coffee & Chicory	1	.. 1	..	..	..	..	..	Pure.
Trace of Arsenic.								
Chicory	.. 3	.. 1	..					2
Cocoa ..	.. 1	.. 1	..	..	..	..	..	} All Pure.
Ground Almonds	4	.. 4	..	..	..	..	..
Gr'nd Cinnamon	5	.. 5	..	..	..	..	..
Ground Ginger	3	.. 3	..	..	..	..	..
Pepper ..	.. 4	.. 4	..	..	..	..	..
Mustard	.. 1	.. 1	..					
With acetic acid.								
Vinegar	.. 5	.. 3	..	..	..	..	..	2. 25%

With Boric Acid.

	No. of Samples.	No. Pure.	No. Deficient or Adulterated.				
Olive Oil	.. 4	.. 4	..	..	..	..	All Pure.
Whisky	.. 6	.. 6	..	..	..	..	All Pure.
Brandy	.. 4	.. 2	..	..	..	..	Deficient in Proof Spirit. 1. 13.5% 1. 2.6%
							2
Gin	.. 6	.. 6	..	..	..	..	All Pure.
Rum	.. 5	.. 2	..	..	..	..	Deficient in Proof Spirit. 1. 6.6% 1. 3.2% 1. 2.6%
							3
Borax	.. 4	.. 4	..	..	..	..	All Pure.
Glycerine	.. 1	.. 1	..	..	..	..	Pure.
Sweet Nitre	.. 2	.. 1	..	..	..	..	Deficient in Ethyl Nitrite. 1. 68%
Cream of Tartar	6	.. 6	..	..	..	..	All Pure.
Tartaric Acid	.. 6	.. 6	..	..	..	..	All Pure.
Liquorice Powder	5	.. 4	..	..	..	..	Deficient in Sulphur. 1. 11%
Chlorodyne							With Morphia.
Lozenges	.. 6	.. 3	..	..	..	..	3. A trace.
Spirit of Camphor	.. 1	.. 1	..	..	..	..	Pure.
Paregoric Elixir	3	.. 2	..	..	1. 30%	..	Deficient in Alcohol. Benzoic Acid. 1. 40%
Oxide of Zinc	.. 4	.. 3	..	..	..	..	With Arsenious Oxide. 1. $\frac{1}{144}$ gr. per lb.
Camphorated Oil	.. 4	.. 3	..	..	..	..	Deficient in Camphor. 1. 5%
Laudanum	.. 3	.. 3	..	..	..	..	} All Pure.
Turpentine	.. 3	.. 3	..	..	..	..
Friar's Balsam	3	.. 3	..	..	..	..
Tincture of Belladonna	.. 1	.. 1	..	..	..	..	Pure.
Tincture of Cinchona	.. 1	.. —	..	..	..	..	Deficient in Alkaloids. 1. 40%
Calcic Phosphate	1	.. 1	..	..	..	..	Pure.
Cinchona	.. 1	.. 1	..	..	..	..	Pure.
Sal Volatile	.. 2	.. 1	..	..	..	..	Deficient in Ammonia. 1. 15½%
Prescription containing Bromide of Potassium and Liquor Arsenicalis	} 10	.. 6	..	Deficient in Potassium Bromide.		Deficient in Arsenic.	
				1. 6%		..	1. 6%
				1. 5%		..	1. 5%
				2		2	
	600	471					133
Total Samples.		Pure					Deficient or adulterated.

The following is a list of samples taken unofficially, and submitted for analysis during 1908. Although no proceedings are taken in these cases, the information gathered by their means is frequently of great value as a guide to further action.

UNOFFICIAL SAMPLES.

No.	Article.	Result of Examination.	Action taken.
1.	Milk	Genuine	
2.	Cough Mixture	Contained Chloroform	Reported to Health Committee.
3.	Bronchial Elixir	" "	" "
4.	Cheshire Cheese	Skimmed Milk Cheese	Subsequent proceedings.
5.	Chlorodyne Lozenges	Contained Morphia	Reported to Health Committee.
6.	" "	Genuine	
7.	" "	Contained Morphia	Reported to Health Committee.
8.	" "	" "	" "
9.	Sample taken from drain gully supposed to be Milk		Subsequent proceedings on further sample.
10.	Butter	(Taken at the request of the Board of Agriculture).	
11.	"	Genuine	
12.	"	"	
13.	"	"	
14.	Elderberry Syrup	Artificial	Subsequent proceedings.
15.	Butter	Genuine	
16.	"	"	
17.	Milk	Deficient in Fat 14%	Subsequent official sample genuine.
18.	Butter	Genuine	
19.	"	Margarine 90%	Subsequent proceedings.
20.	Cheshire Cheese	Genuine	Purchased for Police Court information.
21.	Butter	"	
22.	"	"	
23.	Milk	"	
24.	"	"	
25.	Butter	"	
26.	"	"	
27.	"	"	
28.	"	"	
29.	Laudanum	"	
30.	Butter	Margarine	Reported to Health Committee.
31.	"	"	" "
32.	Milk taken from milkseller's bucket		Subsequent proceedings.
33.	Margarine	Genuine	
34.	Turpentine	"	
35.	Butter	"	
36.	"	"	
37.	"	"	
38.	"	"	
39.	"	"	

Fertilizers and Feeding Stuffs Act, 1906.—The following is a list of unofficial samples taken under the above Act during 1908, and submitted for analysis, with the results of such analysis, and the action, if any, taken thereon:—

No.	Article.	Result of Examination.	Action taken.
1.	Linseed Cake	No warranty on invoice	Vendor cautioned.
2.	Dairy "	Genuine	
3.	Barley Meal	"	
4.	" "	"	
5.	Bone "	"	
6.	Fourths	"	
7.	"	"	
8.	Peruvian Guano	Below guarantee in phosphates, and contains 14% of sand	Reported to Health Committee and Board of Agriculture.
9.	Robson's Feed Cake	Genuine	
10.	Poultry Food	No invoice given	Reported to Board of Agriculture.
11.	Bone Meal	" "	" "
12.	Native Guano	" "	" "
13.	Cotton Cake	Genuine	
14.	" "	"	
15.	Linseed "	"	
16.	Fourths	"	
17.	Linseed Cake	"	
18.	" "	No warranty given	Vendor appeared before Health Committee and was cautioned.
19.	Cotton "	" "	" " "
20.	Linseed "	" "	" " "
21.	Bran	Genuine	
22.	Fourths	"	
23.	Malt dust	"	
24.	Oat Thirds	"	
25.	Ceros	"	
26.	Barley Bran	"	
27.	Uveco	"	
28.	Cotton Cake	"	
29.	Fourths	"	
30.	"	"	
31.	"	"	
32.	Rice Meal	Adulterated	Subsequent official sample taken (1909).
33.	Bran	Genuine	

Prosecutions.—The cases in which proceedings were taken during 1908, and the results of such proceedings, are given below. They were uniformly successful in all cases finally heard, but in five they were arrested, owing to the disappearance of the wholesale

dealer from whom the material in each case had been obtained. A warrant (not yet executed) was issued for the arrest of this person.

It may be well to mention here that the penalties usually inflicted by the Nottingham Bench are less severe, and presumably, therefore, less deterrent than those commonly imposed elsewhere.

PUBLIC HEALTH ACTS.

OFFENCE.	RESULT.
Exposure of Unsound Meat for Sale	Fine of £25, or 3 months' imprisonment.

SALE OF FOOD AND DRUGS ACTS.

OFFENCE.	RESULT.
Sale of Milk containing 15% added water	Fine of £5.
" " 13½% "	" £1.
" " 8% "	" £1/1.
" " 8% "	" £1.
" " 5% "	" £1/1.
" " 11% " and 8½% deficient in fat }	" £1/10.
" " 8½% " 13% "	" £1/10.
Sale of Milk 8% deficient in fat	" 10/-
" 8% "	" 10/-
Sale of Cream containing 29 grs. Boric Acid per lb.	Fine of 9/6 (costs).
" " 28 " " " "	" 9/6 (costs).
" " 28 " " " "	" } 19/- (costs).
" " 20 " " " "	" }
Milkseller impeding Inspector in execution of duty	" £3.
Sale of Butter containing 95% of Fat other than Butter Fat	" £10 (Wholesaler).
" " 95% " " "	" 10/- (Retailer).
" " 95% " " "	" 10/- "
" " 90% " " "	(Wholesale Dealer). Did not appear; warrant issued; not yet arrested.
" " 90% " " "	} Cases in abeyance, pending arrest of wholesale dealer.
" " 90% " " "	
" " 90% " " "	
" " 90% " " "	
Sale of Margarine not properly labelled	Fine of 1/- and 9/6 (costs).
" " " "	" 9/6 (costs).
Sale of Cheese 50% deficient in Fat	Fine of 10/-
" 39% " "	" £5.
Sale of Tripe containing 51·8 grs. Boric Acid per lb.	" 2/6.
Refusal to sell Blackberry Vinegar to Inspector	" £2.
Sale of Paregoric Elixir 30% deficient in Alcohol, and 40% deficient in Benzoic Acid	" 10/-
" Brandy containing 75% of Spirit derived from material other than the grape	" £2
" " 30% " "	" £1
" Whisky deficient in proof spirit 6½%	Defendant ordered to pay costs.

Notices.—The notices issued from the Health Department, or from the Town Clerk's Department on behalf of the former, in respect of nuisances and other matters, were 1,332 in number. The Statutory Notices numbered 166, and the non-statutory or ordinary notices, 1,166. In addition to these there are various intimations, given by letter and by word of mouth, in response to which much work is done. The principal items of remedial work carried out at the instance of the Health Department will be found in the Tables on pages 158 to 161 of this Report.

The Inspectorial Staff.—The following members of the Inspectorial Staff of the Health Department have not been specifically mentioned under the headings of special departments of work in this Report:—

(1) The District Inspectors—Messrs. R. E. Byrns (died Nov. 24th, 1908), W. C. Betts, W. M. Hughes, Cert. R. San. I. (appointed 18th January, 1909), George Old, and Harry Womersley, Cert. R. San. I. In the first place, I desire to express my regret for the loss of an old coadjutor, and a faithful servant of the Corporation, in Mr. R. E. Byrns, who had served as an Inspector of Nuisances of this City for a period of 24 years at the time of his death. I am pleased to say that Mr. Hughes, who was elected (on January 18th of the current year) to succeed Mr. Byrns, had a long experience as a builder's foreman (like his colleague, Mr. Womersley), before qualifying as a Sanitary Inspector, and I need hardly point out that such experience is likely to be of the highest value to himself and to the Health Department in the performance of his duties as an Inspector.

The work of the District Inspectors becomes more onerous and responsible every year, with the growing needs of the City, and the increasing public demand for

such services as these officers perform from day to day in the public interest. Not the least important of the new work they are now called upon to do, is the inspection of insanitary dwellings for the Housing Committee of the Corporation. The principal items of remedial work carried out at the instance of the District Inspectors are given in the Table on page 161 of this Report.

(2) The two Lady Health Visitors and School Nurses—Miss Helen G. Bowers, Cert. R. San. I., and Miss M. S. Jarvis, Cert. R. San. I. These ladies have continued down to the close of the year the excellent work they have hitherto performed as Visitors of Public Elementary Schools, and school children, principally in connection with the scheme for dealing with minor infectious and communicable diseases in school and home, and as visitors and counsellors of the poor in their homes in respect of various matters, but especially with reference to the nursing and treatment of phthisis therein. Under the new administrative arrangement, however, which was described in my Report for 1907, these ladies were recently (during the current year) transferred to the Education Department.

(3) Mr. Herbert Read, Cert. R. San. I., Supernumerary Inspector and Statistical Clerk, with charge of the General Office of the Health Department.

The numerous duties entrusted to Mr. Herbert Read have again been performed in a highly satisfactory manner. I wish particularly to mention the excellence of his statistical work.

ANNUAL REPORT of the MEDICAL OFFICER OF HEALTH for the
year 1908, for the County Borough of NOTTINGHAM (City) on
the administration of the Factory and Workshop Act, 1901, in
connection with

FACTORIES, WORKSHOPS, WORKPLACES, AND HOME-WORK.

[INSPECTORS WILLIAM FLINT and SOPHIE A. BUCKOLL, Cert. R. San. I.]

1.—Inspection of Factories, Workshops, and Workplaces.

INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS OR
INSPECTORS OF NUISANCES.

PREMISES. (1)	Number of		
	Inspections. (2)	Written Notices. (3)	Prosecutions (4)
Factories (Including Factory Laundries.)	400	29	..
Workshops (Including Workshop Laundries.)	3,200	61	..
Workplaces (Other than Outworkers' premises included in Part 3 of this Report.)	..	..	..
TOTAL	3,600	90	..

2.—Defects Found in Factories, Workshops, and Workplaces.

PARTICULARS. (1)	Number of Defects.			Number of Prosecu- tions. (5)
	Found. (2)	Remedied. (3)	Referred to H.M. Inspector. (4)	
<i>Nuisances under the Public Health Acts :—*</i>				
Want of Cleanliness	175	158		
Want of Ventilation	17	16		
Overcrowding	4	4		
Want of drainage of floors	4	4		
Other nuisances	224	220		
†Sanitary accom- { insufficient	12	10		
modation .. { unsuitable or defective	30	28		
{ not separate for sexes	5	5		
<i>Offences under the Factory and Workshop Act :—</i>				
Illegal occupation of underground bake-house (S. 101) .. .. .	..	..
Breach of special sanitary requirements for bakehouses (SS. 97 to 100)	197	182		
Other offences .. .. .	..	..
(Excluding offences relating to out-work which are included in Part 3 of this Report.)				
TOTAL	668	627		

* Including those specified in sections 2, 3, 7 and 8, of the Factory and Workshop Act as remediable under the Public Health Acts.

† Section 22 of the Public Health Acts Amendment Act, 1890, has been adopted by the Nottingham City Council, but the standard of sanitary accommodation enforced is that of the Sanitary Accommodation Order of the Home Office, dated 4th February, 1903.

3.—Home Work.

NATURE OF WORK.	OUTWORKERS' LISTS, SECTION 107.										OUTWORK IN UN- WHOLESOME PREMISES, SECTION 108.				OUTWORK IN IN- FECTED PREMISES, SECTIONS 109, 110.				
	Lists received from Employers.						Addresses of Outworkers.		Notices served on Oc- cupiers as to keeping or sending lists. (10)	Prosecutions.		Inspec- tions of Out- workers' premises. (13)	In- stances. (14)	Notices served. (15)	Prose- cutions. (16)	In- stances. (17)	Orders made (S. 110).	Prose- cutions (Sec- tions 109,110)	
	Sending twice in the year.		Sending once in the year.		Re- ceived from other Councils (8)	For- warded to other Councils (9)	Failing to keep or permit inspec- tion of lists. (11)	Failing to send lists. (12)											
	Lists.† (2)	Con- tractors (3)	Work- men. (4)	Lists. (5)					Con- tractors (6)	Work- men. (7)									
(1)																			
Wearing Apparel— (1) making, &c. (2) cleaning and washing .. Lace, lace curtains and nets ..	38 .. 98	9 .. 60	703 .. 1145	29 .. 122	28 .. 84	226 .. 1142	9	262 .. 130	15 .. 35	.. .. ..	.. .. ..	} 1548	.. .. ..	.. .. ..	.. 30 107	50 30 107	.. .. ..	
TOTAL ..	136	69	1848	151	112	1368	9	392	50	.. ..	.. ..	1548	.. ..	187	187	187	..	..

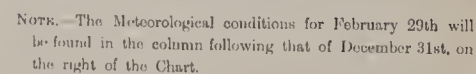
† The figures required in columns 2, 3 and 4 are the *total* number of the lists received from those employers who comply strictly with the statutory duty of sending *two* lists each year, and of the entries of names of outworkers in those lists. The figures in columns 3 and 4 will usually be (approximately) double of the number of individual outworkers whose names are given, since in the February and August lists of the same employer the same outworker's name will often be repeated.

4.—Registered Workshops.		5.—Other Matters.	
Workshops on the Register (s. 131) at the end of the year. (1)	Number. (2)	Class. (1)	Number. (2)
Important classes of workshops, such as workshop bakehouses, may be enumerated here.	Bakehouses (including 40 underground)	<i>Matters notified to H.M. Inspector of Factories:—</i> Failure to affix Abstract of the Factory and Workshop Act (S. 133)	25
	Other Workshops	Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (S. 5) Other	48 48 5
	Total number of Workshops on Register ..	<i>Underground Bakehouses (S. 101):—</i> Certificates granted during the year In use at the end of the year .. .. .	.. .. 40

(Signature) PHILIP BOOBYER, Medical Officer of Health.

NOTE.—The Factory and Workshop Act, 1901 (s. 132), requires the Medical Officer of Health in his Annual Report to the District Council to report specifically on the administration of that Act in workshops and workplaces, and to send a copy of his Annual Report, or so much of it as deals with this subject, to the Secretary of State (Home Office). If the annual report is presented otherwise than in print, it is unnecessary to include in the copy sent to the Home Office the portions which do not relate to factories, workshops, workplaces or homework. The duties of Local Authorities and the Medical Officer of Health under the Act of 1901 are detailed in the Home Office Memorandum of December, 1904. A further Memorandum, on the Homework Provisions of the Factory Act, was issued to all District Councils and Medical Officers of Health in October, 1906.

Chart illustrating the relations of the number of deaths from various causes to the principal Meteorological conditions on each day of the year 1908.



Estimated Population of the City,	middle of 1908,	260,449.
"	"	1909, 263,441.
Area of the City ...		10,935 acres.

Total Deaths during the year, 4024.
Death Rate per 1000 of population per annum, 15.45.

ARTHUR BROWN, M. Inst. C.E., F. R. Met. Soc.,
City Engineer.

PHILIP BOOBBYER, M.D.,
Medical Officer of Health.

53 weeks included in 1908. Figures and Rates accordingly.

NOTTINGHAM, 1908.

Abatement of Nuisances (in Districts).

DESCRIPTION OF WORK DONE.	Inspector WOMERSLEY. Cert. R. San. I.	Inspector OLD.	Insp. BYRNS, died Nov. 24, 1908. Insp. HUGHES, Cert. R. San. I., appointed January 18, 1909.	Inspector BETTS.	Inspector SUTTON. Cert. R. San. I.	TOTAL.
Houses Repaired	32	16	57	49	..	154
„ Cleansed	99	..	72	4	..	175
„ Overcrowding of, Abated	6	..	2	2	..	10
Bath Wastes Disconnected ..	2	3	3	2	..	10
„ Trapped .. ..	..	6	..	1	..	7
Sink Wastes Disconnected ..	1	1	25	4	..	31
„ Trapped	1	2	1	1	..	5
Drains Repaired and Cleansed	138	143	155	185	2	623
„ Trapped	109	132	135	153	5	534
Water-Closets Repaired, &c.	120	33	46	86	1	286
Pail-Closets Repaired ..	171	112	207	134	..	624
„ Provided .. ..	..	..	..	..	..	..
Waste-water-Closets Repaired, &c.	58	39	8	24	..	129
Ashpits Abolished	20	29	40	26	..	115
Privies Abolished	11	22	51	40	..	124
Water-Closets provided in lieu of Privies	9	27	46	35	..	117
Water-Closets provided in lieu of Pail-Closets ..	32	8	2	14	1	57
Soft-water Cisterns Cleansed	8	10	8	10	..	36
Courts and Yards Paved ..	114	133	97	69	4	417
Piggeries Abolished	9	43	1	6	4	63
Stables, etc., Drained ..	..	12	3	1	..	16
Cowsheds, Cleansed, Lime- washed, Repaired, &c. ..	..	..	..	..	184	184
Urinals Repaired, etc. ..	8	5	3	5	..	21
Manure-Pits Repaired, etc. ..	3	4	7	6	1	21
Offensive Accumulations Re- moved	35	41	18	15	12	121
Miscellaneous	138	48	85	88	51	410
TOTALS	1124	869	1072	960	265	4290

APPENDIX A.

HANDBILLS AND LEAFLETS.

City of Nottingham. The Feeding and Care of Infants.

1.—The natural and best food for a young infant is its mother's milk.

2.—The child should be suckled once every two hours during the day, and once every four hours during the night, until it is about three months old, and at gradually lengthening intervals after the lapse of this period.

3.—The child should, if possible, receive no other food than its mother's milk until it is at least six or seven months old.

4.—During the suckling period the mother should take plenty of good, plain, nourishing food, but should avoid alcoholic stimulants and spices.

5.—The mother should wash her nipples after each time of suckling. If they become sore she should apply some glycerine or lanoline to them, and, if necessary, use a nipple-shield carefully cleaned with soap and warm water after each time of using.

The following instructions may be advantageously followed, at the earlier ages in cases where the mother is unable to suckle her infant, and at the later ages in all cases.

(a) During the first six weeks after birth the child should be fed every two hours throughout the day, reckoned between 4 a.m. and 10 p.m., and once again between these hours in the night. Its food should consist of one part of fresh, pure cow's milk, and two parts of water, mixed and boiled, and, after boiling, sweetened with a small teaspoonful of Porto Rico sugar to each pint (of the mixture). Barley water may sometimes with advantage be used instead of plain water, but lime water is better avoided. The mixture should be kept in a clean covered vessel, and in a clean cool place, between meals. The temperature of the food given to a young child should be 95 degrees Fahrenheit, *i.e.*, about the heat of the human hand. One-and-a-half ounces (three tablespoonfuls) to two ounces (four tablespoonfuls) should be given to a child each time it is fed.

Two bottles should always be used, each alternately; one being scalded and rinsed, and afterwards left to soak, while the other is in actual use. The bottles should have no tube or neck, but have a mouth large enough to admit the first finger, and this should be fitted with an india-rubber teat only. The teats should be washed inside and out, after each time of using, with soap and warm water.

(b) From six weeks to three months old the child should be fed with a mixture of equal quantities of cow's milk and water, with sugar as above; but two teaspoonfuls of cream may now be advantageously added to each meal. The quantity given at each meal should be about four ounces (eight tablespoonfuls). The interval between meals should now be gradually but continually lengthened.

(c) From three months to seven months old the child should have a mixture of two parts of cow's milk to one of water. About four ounces (eight tablespoonfuls) should at first be given at each meal, but, the intervals between meals being still lengthened, a larger quantity than this will soon be required for each. The quantity of cream given with each meal may now be increased from two to three or four teaspoonfuls.

The following is a useful working rule for the feeding of a child, with such substitutes for mother's milk as mentioned above, during the period in which liquids should be exclusively used:—

Begin with about 16 oz. a day of twenty-four hours, as under (*a*). Increase this by the addition of 1 oz. to 2 oz. a week up to the end of the first month. After the first month add 4 oz. a month up to the end of the seventh month. At this period, unless the child is regularly to have some quantity of the farinaceous food mentioned in the next paragraph, its milk should amount to at least 40 oz. a day. At nine months a milk-fed child should have three pints in the twenty-four hours.

(*d*) From seven months to twelve months old the child should be given five meals in a day of twenty-four hours. The number of meals will thus have been reduced by a little more than one-half (from eleven to five) in the first seven months. Each meal should consist at the first of about five or six ounces (ten or twelve tablespoonfuls) of undiluted cow's milk, with cream as under (*c*); but three of the meals may also each contain about a teaspoonful or more of some whole-meal farinaceous food, well boiled and stirred up with the milk. All the meals in this period should be given between 6 or 7 a.m. and 9 or 10 p.m.

(*e*) From twelve months to eighteen months old the child should again be fed only during the day, and at about the same intervals (on five occasions) between early morning and night. The amount of milk should be about twice as great as given under (*d*), and porridge, bread and milk, bread and gravy, bread and butter, and a lightly boiled egg occasionally, may with advantage be given with, or in place of the milk as time goes on. It must not be forgotten, however, that pure fresh cow's milk, well boiled, is an excellent and sustaining food, as well as a palatable drink for human beings at all ages.

The quantities of food given above are those generally suitable, but the capacity of children for food varies much, and signs of indigestion due to over-feeding should not be overlooked because a comparatively moderate amount of food is being taken.

It is unwise for a mother to undertake the medical treatment of her child, except, perhaps, to the extent of giving it a little opening medicine occasionally. She should never give it sleeping or quieting medicine except under medical advice.

A young child should not on any account sleep in the same bed with nurse or parents.

A young child should be warmly but loosely clothed over the whole of its body and limbs, and as few pins as possible should be used in dressing it.

It should be remembered that a young child is exceedingly liable to suck or to swallow anything within its reach which admits of being so treated.

It should also be borne in mind that a young child has no dread of fire or hot things unless or until it is actually burnt.

PHILIP BOOBBYER, M.D.,
Medical Officer of Health, Nottingham.

City of Nottingham. Prevention of Diarrhœa and Cholera.

These diseases may in great measure be avoided by the exercise of common care. Cleanliness of person and surroundings and a judicious diet are the best possible safeguards against them. Their germs enter the system through contaminated air, water, and food; it is most important, therefore, to secure the utmost possible purity of these three vital agents.

All parts of a house should be freely ventilated both by day and night:—there is as a rule much less harm to be apprehended from too much than too little fresh air, whatever its temperature or degree of moisture. No decomposing refuse should be allowed to remain in the house or its neighbourhood; all vegetable refuse should be burnt in the kitchen fire. The floors of all rooms, passages, and stairways should be frequently washed with soap and water, and all private courts, alleys, and yards should be flushed with fresh water, as often as possible. All dirty walls should be scraped and limewashed. All drains in the neighbourhood of the house should be flushed at short intervals, and all obstructions to the drainage and faults in the drains, which cannot be dealt with by the tenant, should be reported at once to the **Health Department in the Guildhall**. It is most important that all house drains should be completely disconnected from the sewers. All other offensive nuisances which are not receiving the necessary attention should also be at once reported.

The Public Water Supply of the town is now happily above the suspicion of contamination, but no water even from this source should be allowed to stand before being used for drinking purposes, and all water from private wells or other like sources should invariably be boiled before use.

Only sound and fresh flesh of any kind should be used as food, and this should be well cooked. The same remark applies to cooking vegetables of every description. Unripe or over-ripe fruit should be rigorously avoided. Infants under nine months of age should receive nothing but milk, or milk and water, well boiled, when the milk is from any other source than the mother's breast. All food utensils, and especially milk vessels and babies' feeding bottles, should be well washed and soaked before use, in clean, and, if possible, boiling water.

A qualified medical man should be at once called in to every case of severe bowel disturbance. It is a wise precaution to disinfect with strong solution of carbolic acid the bowel discharges of all Diarrhœa patients, before placing them in the closet pan or pail. All articles or material soiled with such discharges should be at once soaked and cleansed with the same solution.

After it has been ascertained that a patient is suffering from Asiatic Cholera it is essential that the strictest isolation should be maintained at home or in hospital, and that all discharges from the patient's body should be disinfected and placed in a separate receptacle, which will be provided and scavenged by the Corporation; and, further, that all articles soiled with such discharges should be promptly disinfected, or destroyed by fire. Persons attending upon Cholera patients should not touch with their hands, their own or other persons' faces, or any food or food utensil intended for their own or other unaffected person's use. Any case suspected to be one of **Cholera** should be at once notified to me at the **Health Department in the Guildhall**.

PHILIP BOOBYER, M.D.,

Guildhall, Nottingham.

Medical Officer of Health.

(Circulated during recent Small-Pox Outbreak.)

City of Nottingham.

Small-Pox and Vaccination.

Small-Pox is once more prevalent in this District and many other parts of the Country, and numerous fresh cases are reported daily. It is, therefore, desirable for people resident in Nottingham (and elsewhere) to seek protection against it.

GOOD RECENT VACCINATION IS AN EFFICIENT PROTECTION AGAINST SMALL-POX, and the degree of protection it confers is directly proportional to the recentness and thoroughness of the operation.

All persons who have not been properly vaccinated or re-vaccinated within the past ten years, should be well vaccinated without delay.

The risk of injury from vaccination when considered in relation to the total amount of vaccination work done, is altogether insignificant.

PHILIP BOOBBYER, M.D.,

Guildhall, Nottingham.

Medical Officer of Health.

Official Notice under the Shop Hours Acts, 1892 to 1895, to amend the Law relating to the Employment of Young Persons in Shops.

NOTICE IS HEREBY GIVEN that, under the above Acts, a young person cannot be employed in or about a shop for a longer period than seventy-four hours, including meal times, in any one week.

A young person cannot, to the knowledge of his employer, be employed in a shop who has been previously on the same day employed in any factory or workshop, as defined by the Factory and Workshop Act, 1878, for the number of hours permitted by the said Acts, or for a longer period than will, together with the time during which he has been so previously employed, complete such number of hours.

In every shop in which a young person is employed, a Notice must be kept exhibited by the employer in a conspicuous place, referring to the provisions of these Acts, and stating the number of hours in the week during which young persons may be lawfully employed therein. If any employer fails to keep exhibited this Notice in the manner required, he is liable to a fine not exceeding forty shillings.

Where any young person is employed in or about a shop contrary to the provisions of these Acts, the employer will be liable to a fine not exceeding one pound for each person so employed.

The Council of any County or Borough, and in the City of London the Common Council, may appoint such Inspectors as they may think necessary for the execution of these Acts within the areas of their respective jurisdictions, and Sections 68 and 70 of the Factory and Workshop Act, 1878, shall apply in the case of any such Inspector as if he were appointed under that Act, and as if the expression "Workshop," as used in those sections, included any shop within the meaning of these Acts.

In these Acts, unless the context otherwise requires, "Shop" means retail and wholesale shops, markets, stalls, and warehouses, in which assistants are employed for hire, and includes licensed Public-houses and Refreshment-houses of any kind.

"Young person" means a person under the age of eighteen years.

Other words and expressions have the same meanings, respectively, as in the Factory and Workshop Act, 1878.

Nothing in these Acts applies to shops where the only persons employed are members of the same family dwelling in the building of which the shop forms part, or to which the shop is attached, or to members of the employer's family so dwelling, or to any person wholly employed as a domestic servant.

And Notice is Hereby Given, that no young person can be employed in or about these premises for a longer period than seventy-four hours, including meal times, in any one week.

City of Nottingham. Prevention of Tuberculous Consumption.

This disease is infectious, and liable to spread among persons living in contact with those suffering from it. It is, however, in many cases entirely curable under appropriate treatment.

Where the lungs are principally affected, the spit of the patients contains most of the poison. This should, as far as possible be received into a vessel containing a strong solution of Carbolic Acid (1 of Carbolic to 20 of Water), and all washing materials and utensils soiled by the patients should be soaked in the same solution before being washed. Pocket spit bottles, containing the above Carbolic Acid and water mixture, should be used out of doors; they should be emptied into a fire and washed out with hot water after use.

The spit and other infectious matters from consumptive patients, whether disinfected or not, should always be destroyed (if possible by fire) before they become dry. They are most dangerous when dried, especially when taking the form of dust.

Consumptive patients should not kiss other persons on the face. They should have a set of table utensils for their own separate use. They should always sleep alone.

The rooms of consumptive patients should be freely ventilated both by day and night, and should be disinfected and cleaned (with damp cloths soaked in disinfecting liquid) at short intervals.

Consumptive patients should spend as much time as possible in the open air.

In case of the death or removal of any consumptive patient, the Health Department will, if desired, undertake the disinfection of the infected house and materials free of charge.

A considerable proportion of milch cows suffer from tuberculous disease, and the milk of such cows, especially when the udders are affected, is liable to be highly charged with the tuberculous poison. It has been shown that animals taking tuberculous milk in the raw state are exceedingly liable to contract the disease ; all ordinary cow's milk, therefore, should be sterilized or boiled before use.

PHILIP BOOBBYER, M.D.,

Guildhall, Nottingham.

Medical Officer of Health.

Nottingham Corporation. Bagthorpe Hospital. Scarlet Fever.

TO PARENTS, GUARDIANS, AND OTHERS.

Although every care is exercised to prevent the carriage of infection by persons discharged from Bagthorpe Hospital, it is impossible in some instances to insure against such an accident, for no one can say with certainty how long the scarlet fever poison may lurk in the system. Parents and others are warned against allowing recently discharged patients to come into unnecessarily intimate contact with others. No person discharged from a Fever Hospital should be allowed to sleep in the same bed as another until at least a fortnight after such discharge. A short holiday in the country, spent as far as possible apart from others and in the open air, is always desirable for persons convalescing from scarlet fever. But all persons recovering from scarlet fever should be warmly clothed, and otherwise protected against cold. Any recently discharged person who complains of sore throat, nose, or ears, or who has a breaking out on the skin, should be at once isolated, and placed under the care of a medical man. In any case the Corporation cannot accept responsibility or liability for the outbreak of infection occurring among the companions of persons recently discharged from hospital.

PHILIP BOOBBYER, M.D., *Medical Superintendent.*

The Sanitary Accommodation Order of 4th February, 1903.

In pursuance of Section 9 of the Factory and Workshop Act, 1901, I hereby determine that the accommodation in the way of sanitary conveniences provided in a factory or workshop shall be deemed to be sufficient and suitable within the meaning of the said section if the following conditions are complied with and not otherwise :—

1. In factories or workshops where females are employed or in attendance there shall be one sanitary convenience for every 25 females.

In factories or workshops where males are employed or in attendance there shall be one sanitary convenience for every 25 males : provided that—

(a) In factories or workshops where the number of males employed or in attendance exceeds 100, and sufficient urinal accommodation is also provided, it shall be sufficient if there is one sanitary convenience for every 25 males up to the first 100, and one for every 40 after ;

(b) In factories or workshops where the number of males employed or in attendance exceeds 500, and the District Inspector of Factories certifies in writing that by means of a check system, or otherwise, proper supervision and control in regard to the use of the conveniences are exercised by officers specially appointed for that purpose it shall be sufficient if one sanitary convenience is provided for every 60 males, in addition to sufficient urinal accommodation. Any certificate given by an Inspector shall be kept attached to the general register, and shall be liable at any time to be revoked by notice in writing from the Inspector.

In calculating the number of conveniences required by this order, any odd number of persons less than 25, 40, or 60, as the case may be, shall be reckoned as 25, 40, or 60.

2. Every sanitary convenience shall be kept in a cleanly state, shall be sufficiently ventilated and lighted, and shall not communicate with any work-room except through the open air or through an intervening ventilated space : provided that in work-rooms in use prior to 1st January, 1903, and mechanically ventilated in such a manner that air cannot be drawn into the work-room through the sanitary convenience, an intervening ventilated space shall not be required.

3. Every sanitary convenience shall be under cover and so partitioned off as to secure privacy, and if for the use of females shall have a proper door and fastenings.

4. The sanitary conveniences in a factory or workshop shall be so arranged and maintained as to be conveniently accessible to all persons employed therein at all times during their employment.

5. Where persons of both sexes are employed, the conveniences for each sex shall be so placed or so screened that the interior shall not be visible, even when the door of any convenience is open, from any place where persons of the other sex have to work or pass ; and, if the conveniences for one sex adjoin those for the other sex, the approaches shall be separate.

6. This order shall come into force on the 1st day of July, 1903.

7. This order may be referred to as the Sanitary Accommodation Order of 4th February, 1903.

A. AKERS DOUGLAS,

One of His Majesty's Principal
Secretaries of State.

Home Office, Whitehall,
4th February, 1903.

APPENDIX B.

The Public Health (Tuberculosis) Regulations, or Order, 1908, open with the following preamble:—

Whereas We, the Local Government Board, are empowered by Section 130 of the Public Health Act, 1875, as amended by the Public Health Act, 1896, from time to time, to make, alter, and revoke Regulations for preventing the spread of endemic or infectious disease; and to provide for the enforcement and execution of the Regulations;

And whereas Tuberculosis is an endemic disease and that form of the disease which is known as Pulmonary Tuberculosis is an infectious disease;

And whereas it appears to Us to be expedient that for preventing the spread of Tuberculosis, including Pulmonary Tuberculosis, such Regulations as are herein-after set forth be made in relation to that disease:

Now therefore, We, by this Our Order and in the exercise of the powers conferred upon Us by the Public Health Act, 1875, the Public Health (London) Act, 1891, and the Public Health Act, 1896, and of every other power enabling Us in that behalf, do make the following Regulations, that is to say:—

Then follow the actual Regulations, of which the circular letter, below, serves as an abstract.

Circular.—Guardians, Joint Committees, and Managers of Asylum and School Districts.

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1908.

LOCAL GOVERNMENT BOARD,
WHITEHALL, S.W.,

18th December, 1908.

SIR,

I am directed by the Local Government Board to state that they have had under consideration the desirability of affording facilities for the extension of administrative action for the prevention of tuberculosis, and that with this view they have issued an Order in pursuance of Section 130 of the Public Health Act, 1875, as amended and extended by the Public Health (London) Act, 1891, and the Public Health Act, 1896, to provide for the notification to the Medical Officer of Health of Sanitary Authorities of cases of pulmonary tuberculosis occurring amongst the inmates of Poor Law Institutions, or amongst persons under the care of District Medical Officers, and for the taking of certain measures in such cases.

NOTIFICATION BY MEDICAL OFFICERS OF POOR LAW INSTITUTIONS.

Article IV. of the Order directs that the Medical Officer of a Poor Law Institution, as defined by Article I., shall within 48 hours after his first recognition of the symptoms of pulmonary tuberculosis in the case of a poor person who is an inmate of the institution, post to the Medical Officer of Health of the sanitary district in which the person resided immediately before he became an inmate of the Poor Law Institution a notification of the case.

The notification must be made on a printed form as set out in the Schedule to the Order.

NOTIFICATION BY DISTRICT MEDICAL OFFICERS.

Article V. directs that a similar notification shall be posted to the Medical Officer of Health by the District Medical Officer in the case of any poor person suffering from pulmonary tuberculosis on whom he is in medical attendance according to his agreement with a Board of Guardians.

The notification must be sent within 48 hours after the District Medical Officer has first recognised the symptoms of pulmonary tuberculosis, and must be addressed to the Medical Officer of Health acting for the sanitary district in which the residence of the poor person is situate.

NOTIFICATION BY SUPERINTENDING OFFICERS OF POOR LAW INSTITUTIONS.

Under Article VI. it will be the duty of the Superintending Officer of a Poor Law Institution to post to the Medical Officer of Health on a printed form as set out in the Schedule to the Order a notification of the actual or intended place of destination and address at that place of any person leaving the institution in respect of whom a notification has been made by the Medical Officer of the institution under Article IV.

The notification must be posted within 48 hours after the departure of the person to whom it relates, and must be sent to the Medical Officer of Health of the sanitary district in which the intended destination of the person is situate. The term "Superintending Officer" is defined in Article I. (*h*)

NOTIFICATION OF CHANGES OF ADDRESS BY RELIEVING OFFICERS.

Article VII. provides that a Relieving Officer shall notify any change of address (other than by admission to a Poor Law Institution) of a person in respect of whom a notification has been made under Article V. by a District Medical Officer.

The notification must be made on a printed form as set out in the Schedule to the Order, and must be sent to the Medical Officer of Health for the sanitary district in which the address to which the person moves is situate.

The notification must be posted within 48 hours after the Relieving Officer has obtained accurate information respecting the change of residence.

REMUNERATION TO BE ALLOWED.

Provision is made by Article VIII. for the remuneration of the Officers who have to make notifications under the Order. In the case of the Medical Officer of a Poor Law Institution or a District Medical Officer, the remuneration will be at the rate of one shilling for every notification, but where in relation to any one case two or more notifications have been posted by the Medical Officer to the same Medical Officer of Health, his remuneration will be at the rate of sixpence for every such notification after the first.

In the case of a Superintending Officer of a Poor Law Institution or a Relieving Officer, the remuneration will be at the rate of threepence for every notification.

The remuneration will be payable by the Council of the sanitary district for which the Medical Officer of Health acts, it will be deemed to cover the cost of postage, and it will be payable in the manner and subject to the conditions prescribed by the Article.

SUPPLY OF FORMS.

Under Article III. of the Order, it will be the duty of the Guardians to provide a sufficient supply of printed copies of each of the Forms A, B, C, D, and E, set forth in the Schedule to the Order, and to furnish to each of the officers who are required to use them a book containing a sufficient number of those copies for the requirements of the officer. The book must be so arranged that every notification can be readily detached from the counterfoil. They must also keep a

record of the name and address of the Medical Officer of Health appointed by each Council, and of such other particulars as are necessary to facilitate the prompt delivery of a notification to any such Medical Officer of Health in the ordinary course of post.

Joint Committees constituted under Section 8 of the Poor Law Act, 1879, and the Managers of Asylum Districts and School Districts must keep a like record, and must also provide and furnish their officers with books similar to those above referred to, but containing only Forms A, C, and E.

EXPENSES OF POOR LAW AUTHORITIES.

Article X. provides that all expenses incurred by a Board of Guardians, a Joint Committee, or a Board of Managers under the Order shall be defrayed as part of their establishment expenses.

DETERMINATION OF QUESTIONS OR DIFFERENCES.

Article XI. will enable the Board to determine any question or difference in relation to anything done under the Order on the application of any of the parties affected.

PULMONARY TUBERCULOSIS NOTIFIABLE UNDER LOCAL ACTS.

Article XII. deals with those cases in which powers have been obtained with respect to pulmonary tuberculosis by a Local Act.

Nothing in the Regulations will have effect in derogation of any power or obligation under any such Act, but subject to this the Regulations will apply to any district in which a Local Act containing provisions with respect to pulmonary tuberculosis is in force.

The Board may, however, direct that so much of the Regulations as relates to a notification by a Medical Officer of a Poor Law Institution or a District Medical Officer shall not have effect in relation to that district.

DATE ON WHICH THE ORDER COMES INTO EFFECT.

The Order will take effect on and after January 1st next, and it is desirable that the arrangements which are necessary to facilitate carrying it out should be made without any delay. In fixing January 1st as the date when the Order shall come into operation the Board have had regard to the convenience, from a statistical point of view, of the Order taking effect at the commencement of a calendar year.

If, however, any delay occurs in the printing of the forms, it may be understood that it will not be necessary to carry out the Regulations until these can be obtained.

Copies of the Order and Circular are enclosed, and I am to request that a copy of each may be given to every Officer on whom the duty of notifying rests under Articles IV. to VII. of the Order. Further copies will be supplied for this purpose on application to the Board, if required.

The Order and Circular will be placed on sale so that copies may shortly be obtained, either directly or through any bookseller, from Messrs. Wyman & Sons, Limited, Fetter Lane, London, E.C.

I am, Sir,

Your Obedient Servant,

S. B. PROVIS,

Secretary.

The Clerk to the Guardians, *or*
to the Joint Committee *or*
to the Board of Management.

APPENDIX C.

From Mr. John Terry, Wharf Superintendent :—

COLLECTION OF REFUSE.

Pail Closets.—The pail closets now on the books number 36,531, as against 36,697 in 1907, and 36,886 in 1906. The whole of the pails in use are made of galvanized steel. These are found to be much more cleanable than the old wood tubs (which have now entirely disappeared), whilst the cost remains practically the same.

Each pail is brought to the dépôt to be emptied, and before being returned is washed out and sprinkled with Carbolic Powder. Considering the large number emptied, the number of complaints as to dirty pails is extremely small.

There have been emptied during the year 2,494,147 pails, equal to 47,964 per week. Each pail has been emptied on an average 68·27 times during the year.

The following table gives a comparative statement of the number of pails emptied during the past 18 years :—

Number of Pails Collected, 18 Years ending December 31st, 1908.

YEAR.	NOTTINGHAM	BASFORD AND BULWELL.	RADFORD AND LENTON.	TOTAL.	WEEKLY AVERAGE.
1891	1,593,674	560,127	432,324	2,496,125	48,002
1892	1,523,965	580,061	446,687	2,550,713	49,052
1893	1,525,804	587,718	443,960	2,557,482	49,182
1894	1,559,608	605,349	445,606	2,610,563	50,203
1895	1,594,130	631,219	432,450	2,657,799	51,111
1896	1,598,814	636,951	441,126	2,676,891	51,478
1897	1,568,172	636,744	444,859	2,649,775	50,957
1898	1,542,856	638,493	468,070	2,649,419	50,950
1899	1,529,546	637,420	478,475	2,645,441	50,874
1900	1,522,549	640,976	475,195	2,638,720	50,745
1901	1,510,423	640,653	476,124	2,627,200	50,523
1902	1,496,922	638,370	481,970	2,617,262	50,332
1903	1,488,385	641,390	482,289	2,612,064	50,232
1904	1,477,526	644,031	481,018	2,602,575	50,049
1905	1,450,262	636,984	474,180	2,561,426	49,258
1906	1,440,157	636,002	474,355	2,550,514	49,048
1907	1,417,894	527,153	572,677	2,517,724	48,418
1908	1,403,423	454,754	635,970	2,494,147	47,964

Ashpits.—The number of ashpits in the City is now about 1,050; many of these are very large, holding ten or twelve loads each, and are not emptied more than about once per year. During the year there have been emptied 2,704 pits, and there has been removed therefrom 2,701 loads of wet refuse, and 1,585 loads of dry ashes. There has also been removed 1,691 loads of liquid from 345 cesspools, giving a total of 5,977 loads. This is an increase of 444 loads over the previous year, and the excess is accounted for entirely by the number of cesspools which have recently been constructed. This work now keeps a man and horse constantly employed, whereas in 1905 there was only one day's work of this kind per month.

The number of loads for the previous seven years are as follows:—

1901	1902	1903	1904	1905	1906	1907
<u>4650</u>	<u>7933</u>	<u>8031</u>	<u>6473</u>	<u>5655</u>	<u>5362</u>	<u>5533</u>

Dry Ash Bins.—There are now on the books 22,284 ash pans or tubs (11,825 worked from the Eastcroft depôt and 10,459 from the district depôts). There has been an increase during 1908 of 1,618 tubs, and one of 8,042 during the past four years. This increase is a very large one (principally due to new property) and is spread over a very large area, necessitating an increased number of horses and men, and entailing much disorganization of the regular collections.

The number of loads collected by the dry ash carts during the year was 21,613, and by the pot carts 2,662—a total of 24,275, or 467 per week, as against 381 per week during 1904.

Slaughter House Refuse.—990 loads, weighing 922 tons, have been collected from 275 galvanized steel pails at 63 slaughter-houses. These pails are brought to the depôt to be emptied, and before being returned are thoroughly washed. The amount received for the hire of pails was £34 7s. 6d.

The following table shows the total number of loads collected in each district during each of the past 14 years.

Number of Loads Collected.

	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
NOTTINGHAM:—														
Pail-Closets ..	75,911	76,134	74,675	73,469	72,835	72,502	71,925	71,282	70,876	70,358	69,060	68,579	67,519	66,830
Night Ashpits ..	2,460	2,278	2,391	2,406	2,263	2,372	2,291	2,148	1,758	1,293	1,325	1,161	1,138	958
D.A. Pits & D.A. Tubs	8,820	9,518	10,230	11,851	13,275	14,055	15,018	11,000	11,673	11,658	12,016	12,482	12,959	13,116
Slaughter-houses ..	975	1,037	1,021	1,034	1,023	1,058	1,123	1,060	918	964	970	975	981	990
Pot Carts ..	1,348	1,379	1,390	1,360	1,371	1,817	2,043	2,215	2,421	2,515	2,582	2,608	2,643	2,662
BASFORD and BULWELL:—														
Pail-Closets ..	30,058	30,331	30,321	30,404	30,353	30,522	30,507	30,398	30,543	30,668	30,332	30,286	25,103	21,655
Night Ashpits ..								1,037	2,047	2,032	1,648	1,597	1,273	1,190
D.A. Tubs ..								5,035	6,346	5,603	5,806	6,705	6,776	6,038
RADFORD and LENTON:—														
Pail-Closets ..	20,593	21,006	21,183	22,289	22,784	22,628	22,673	22,951	22,966	22,906	22,580	22,588	27,270	30,284
Night Ashpits ..	1,951	2,666	2,844	3,276	2,779	2,083	2,363	2,426	2,003	1,507	939	817	699	553
D.A. Tubs ..										1,772	2,026	2,442	2,752	4,044
TOTALS ..	142,116	144,349	144,055	146,089	146,683	147,037	147,943	149,552	151,551	151,276	149,284	150,240	149,113	148,320
WEEKLY AVERAGES	2,733	2,775	2,770	2,809	2,821	2,828	2,845	2,876	2,914	2,909	2,871	2,889	2,867	2,852

Disposal of Refuse.—The past year has been slightly better than its predecessor as regards the disposal of nightsoil. The wet weather in the early part caused a few orders to be cancelled, but the greatest drawback has been our inability to use the canals at a time when the farmers cannot take nightsoil by rail. For a great portion of the year the canals were unfit for use either for want of cleansing or lack of water, and at these times it was necessary to deposit nightsoil at the depôts in order to allow it to drain, and then burn it in the destructors; 4,880 tons have been disposed of in this manner during the year.

The Eastcroft Destructor has been at work 5,275 hours during 1908, and has consumed 31,481 tons, as against 32,109 in 1907, and 25,939 during 1906. It has produced 1,120,914 units of electricity and evaporated 8,693,400 gallons of water. Of the nightsoil refuse thus burnt, 6,994 tons were brought by rail from Basford, at a cost of £478, and 899 tons from Radford at a cost of £49.

Owing to the cessation of building operations in the Meadows district, there has been no demand for the clinkers produced at the Eastcroft, with the result that it is now costing some £300 per annum to dispose of them.

The Radford Destructor has been kept at work throughout the year, and has consumed 5,447 tons of dry ashes, 1,236 tons of pail closet refuse, 498 tons of ash-pit refuse, and 936 tons of trade refuse—a total of 8,117 tons, as against 8,444 tons during 1907.

2,946 tons of clinker and flue dust have been produced, and a large quantity of this has been sent away by rail for sewage works, road making, etc., the remainder being carted to the nearest tip at Dunkirk.

In addition to the 4,880 tons of nightsoil burnt in the destructors, the following amounts were sent away, by various means of transit, as manure:—By boat, 12,468 tons; by rail from Eastcroft, 6,757 tons; from Basford, 5,572 tons; and from Radford, 6,295 tons. By traction engine from Eastcroft, Basford and Radford, 7,350 tons, and by carts (to farms) 270 tons. This gives a total of 38,712 tons sent to farmers, being 2,911 tons less than the previous year.

The following table shows the quantities of nightsoil sent out by rail and boat during the past 14 years:—

Disposal of Refuse.

	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
of Wagons ent out ..	4,109	3,134	3,091	3,595	3,145	1,984	3,077	3,151	3,130	3,142	3,289	3,009	2,041	2,229
verage Weight er Wagon..	T. C. Q. 7 17 2	T. C. 7 18	T. C. Q. 7 19 3	T. C. Q. 7 19 1	T. C. Q. 8 1 2	T. C. 8 0	T. C. Q. 8 1 2	T. C. Q. 8 2 2	T. C. Q. 8 3 0	T. C. Q. 8 2 1	T. C. Q. 8 3 0	T. C. Q. 8 1 0	T. C. Q. 8 2 3	T. C. Q. 8 7 0
of Boats ent out ..	359	574	514	479	592	734	633	580	613	491	415	492	648	445
verage Weight er Boat ..	T. C. Q. 32 10 0	T. C. 32 10	T. C. 32 17	T. C. Q. 33 6 1	T. C. Q. 33 2 2	T. C. Q. 31 10 1	T. C. Q. 29 17 2	T. C. Q. 29 3 2	T. C. Q. 29 13 3	T. C. Q. 29 17 0	T. C. Q. 28 9 3	T. C. Q. 28 19 0	T. C. Q. 28 13 3	T. C. Q. 28 0 1

The whole of the refuse received at the Eastcroft (excepting that from pail closets) is weighed, and the figures for the past six years have been as follows :—

	1903	1904	1905	1906	1907	1908
	Tons	Tons	Tons	Tons	Tons	Tons
Dry Ashes	11,901	14,139	13,959	14,266	14,887	15,017
Wet Ashpit Refuse	1,517	1,242	1,373	1,128	1,103	854
Trade Refuse (General) ..	3,397	3,687	3,283	3,450	3,603	2,867
Trade Refuse (Butchers, &c.) ..	2,430	2,597	2,383	2,335	2,588	2,382
Ashes from Basford & Bulwell	4,884	3,251	2,852	4,024	7,817	6,994
Rammel, &c., from Radford ..	1,074	126	—	—	—	899
TOTALS ..	25,203	25,042	23,850	25,203	29,998	29,013

In dealing with the refuse, the following has been collected from it and sold, realizing the sum of £229 10s. 11d., as against £267 16s. 0d. in 1907.

	Tons.	cwts.	qrs.
Solder (recovered from old tins)	0	16	3
Light tins (from solder furnace)	78	0	0
Light iron and tins... ..	91	7	1
Galvanized scrap	87	13	0
Paper	14	11	1

Depôts.—These are three in number, situated as follows :—Eastcroft; Ilkeston Road, Radford; and Vernon Road, Basford.

The premises have in each case been maintained in good condition. The additional stabling provided at Radford is now fully occupied, and if the building operations in that district continue at the present rate, it will not be long before further accommodation will be required.

The Mapperley Park Estate is being rapidly built upon, and a depôt in this district will shortly become a necessity if we are to deal with the refuse in an economical manner.

HORSES.

Total number of Horses, December 31st, 1907	...	...	109
Disposed of during 1908	...	...	14
Purchased during 1908	...	...	14
Number of Horses at Eastcroft	...	...	66
„ „ Basford	...	...	21
„ „ Radford	...	...	20
„ „ Bagthorpe	...	...	2
Total number			109

Ten horses have been sold as being no longer suitable for our work. The average working life of the horses so disposed of was $7\frac{1}{2}$ years, as against 8 during 1907. One horse has been destroyed as unfit for work, and we have lost three which have died from twist of the bowels. Although the proportion of casualties is small, the year's record is the worst since my appointment. Apart from these deaths, the health of the horses has been all that could be desired. The sum realized for horses sold was £133 18s. 6d. The horses purchased cost £53 each.

The cost of horse keeping during the year has been 14/4 per horse per week, as against 14/3 during 1907. The increased cost is due entirely to the rise in the price of corn and fodder.

Rolling Stock and Boats—These consist of 62 drays, 58 carts, 1 wagon, 31 railway wagons, and 7 canal boats. The whole have been kept in good repair during the year, and experiments are still being tried with various covers for the dry ash carts, but up to the present none has proved satisfactory for our class of cart.

Cleansing of Courts, Passages, etc.—This work, which now forms a permanent feature of the Nightsoil Department, has been entirely reorganized during the year and placed under better supervision, with the result that a much larger number of yards and closets are dealt with than previously. At the present time, eight men are engaged in washing out and disinfecting the closets, courts, alleys and yards in the Meadow Platts and lower Sneinton Districts. Each week they cleanse 388 passages and 1,861 closets.

INDEX.

	PAGE		PAGE
Abattoirs	145	Diphtheria, Antitoxin ..	48, 49, 112, 113
Accidents, Deaths from ..	14, 16, 98, 99	Diphtheria, Cases of, in Isolation	
Alcoholism as a Death cause	8, 16, 81, 82	Hospital..	102 to 104, 111 to 114, 117
Apoplexy, Deaths from	10, 88, 89	Diseases of Animals Act.....	141, 142
Area and Altitude of City	22	Diseases other than Principal	
		Epidemic	8 to 17, 73 to 98
Bacteriological Laboratory ..	119 to 121	Disinfection, Public	121 to 123
Bakehouses	139, 158, 160	District Inspectors and their Work	
Births ..	4, 5, 6, 7, 19 to 21, 23, 26 to 29,		156, 157, 161
	32 to 34, 36	Dust and Flies as Factors in spread	
Births, illegitimate	26, 27, 33, 34, 85	of Disease	52
Births, Male and Female	26, 33	Dwellings, Infected, and Outwork	
Births, Notification of, Act ..	5, 63, 64,		139, 140, 159
	131 to 136	Dwellings, Unwholesome, and Out-	
Birth-rate Declining.....	27 to 29	work	139, 140, 159
		Earth Temperatures and Deaths	
Canal Boats	138	from Diarrhœa	62, 65 to 68
Cancer, Deaths from....	8 to 11, 36, 37,	Enteric Fever..	4, 8, 9, 16 to 19, 35, 36,
	82 to 84		38, 39, 51 to 62, 69 to 72, 102 to 104,
Cases in Hospital, with particulars			110, 111, 117, 120
as to disease, age, sex, result,		Enteric Fever, cases and deaths, age-	
etc.	102 to 118	and-sex-incidence of	58, 59
Child-birth, Accidents of, Deaths from		Enteric Fever, Endemic.....	51 to 62
	12, 13, 16, 97, 98, 136 to 138	Enteric Fever, Temperature and	
City, The, Certain data of	22	Rainfall	39, 52, 60, 61
Common Lodging Houses ..	125 to 128	Enteric Fever Cases, Spot Map and	
Congenital Defects, Deaths from		Chart of.....	56A, 56B
	10, 11, 85	Enteric Fever in Houses with Closets	
Consumption, Deaths from, in		of Different Types	56, 57
houses of various rentals.....	79	Enteric Fever, Cases of, in Isolation	
Consumption and Disinfection		Hospital..	102 to 104, 109 to 111, 117
	122, 166, 167	Epidemic Diseases....	4, 8, 9, 16 to 20,
Consumption Handbill	115, 119, 166, 167		34 to 36, 38 to 72, 102 to 114, 116,
Consumption, Vital Statistics of	8, 9, 16,		117, 120, and terminal Chart.
	17, 19, 36, 37, 75 to 81, 114A, 114B	Epidemic Diseases, Seasonal inci-	
Consumption, Municipal Sanatorium		dence of, with Temperature and	
for.....	80, 81, 102, 103, 114 to 116	Rainfall.....	39, 64 to 68, and
Consumption, Notification of		terminal Chart.	
	79 to 81, 169 to 171	Epilepsy, Deaths from	10, 11, 89, 90
Consumption, Cases of, in Hospital		Erysipelas, Deaths from	8, 9, 16, 70 to 72, 74
	102, 103, 114 to 116	Factory and Workshop Acts..	138 to 140,
Convulsions, Deaths from..	10, 11, 17, 87		158 to 160
Courts and Yards, cleansing of..	129, 179	Fertilizers and Feeding Stuffs Act ..	154
Coroners' Inquests	100, 101	Food Material Condemned ..	147 to 149
Dairies, Cowsheds and Milkshops		General Diseases	73 to 98
	142 to 145, 161	Geology of Nottingham	22
Deaths, Male and Female	4, 6 to 21,	Great Towns, The	20, 21
	29 to 101		
Deaths, Uncertified	14, 20, 21, 100	Handbills	119, 162 to 168
Diabetes, Deaths from.....	10, 11, 84	Heart, Diseases of, Deaths from	
Diarrhœa..	4, 8, 9, 16 to 18, 30, 31, 35, 36,		10, 11, 16, 91
	38, 39, 53, 62 to 68, 72, 119, 164	Home Work.....	139, 140, 159
Diarrhœa and Cholera Handbill	119, 164	Horses of Sanitary Wharves	178
Diarrhœa, Rainfall, and Earth Tem-		Housing Committees	128, 135
perature.....	65 to 68	Housing of Working Classes Acts ..	
Diarrhœa of Infants and Hand			128 to 131
Feeding	64, 66, 85, 135	Housing and Town Planning Bill	130, 131
Diphtheria Spot Map	48A	Houses, Insanitary	128 to 131, 161
Diphtheria..	4, 8, 9, 16 to 19, 34 to 36, 38,		
	39, 47 to 49, 69 to 72, 102 to 104,	Improper Feeding	10, 11, 64, 66, 85,
	111 to 114, 117, 120		132, 135

	PAGE		PAGE
Infant Feeding Leaflet	119, 162, 163	Re-housing Schemes	130
Influenza, Epidemic	8, 9, 16, 36, 92	Respiratory Diseases, Deaths from	12, 13, 16, 17, 91 to 93
Inhabited Houses	6, 23	Rheumatism, Deaths from	8, 9, 75
Insanity, &c., Deaths from	10, 11, 89	Rickets, Deaths from	10, 11, 86
Introduction	4, 5		
Isolation Hospitals	102 to 119		
		Sale of Food and Drugs Acts	149 to 153, 155
Lady Health Visitors	131, 132, 134, 136, 139, 140, 157	Sanatorium, Municipal, for Phthisis	Cases—See Consumption.
Lavatories, Public	125	Sanitary Accommodation in Factories	(Home Office Order)
Lethal Chamber	146	Scarlet Fever 4, 8, 9, 16 to 19, 34, 36, 38,	39, 45 to 47, 69 to 72, 102, to 109, 117, 167
Maps showing Registration Sub-		Scarlet Fever, Cases of, in Isolation	Hospital
Districts	48A, 56A	Scarlet Fever, Secondary and Return	Cases of
Marriages	6, 25, 26	Scarlet Fever, Notice to Parents and	Guardians
Measles	4, 8, 9, 16 to 19, 34, 36, 38, 39, 42 to 44, 72	Scavenging Statistics, Tables of	172 to 178
Meningitis, Deaths from	10, 11, 16, 87, 88	Schools, Closure of	43, 44
Meteorological and Mortality Chart,	under cover at end.	Septic Diseases	8, 9, 16, 74
Meteorology and Seasonal Incidence	of Zymotic Diseases	Sheep-Dipping Order	142
and Terminal Chart.	39, 64 to 68,	Shop Hours Acts	141, 165, 166
Midwives Act	98, 136 to 138	Slaughter-Houses	145, 146
Milk, Dirty and Infected	143, 144	Small-pox	19, 38, 40 to 42, 165
Milk Sterilization	86, 162 to 164	Small-pox and Vaccination	40 to 42, 165
Milk and Tuberculosis	120, 143 to 145, 166, 167	Small-pox and Vaccination Handbill	165
Mortuaries	123, 124	Spot Map of Diphtheria Cases	48a
Mothers' and Babies' Welcome	63, 64, 133 to 136	Spot Map of Enteric Fever Cases	56a
Municipal Lodging Houses	127, 128	Suicides	14, to 16, 99
Nephritis, Deaths from	12, 13, 16, 95, 96	Swine Fever	141
Notices Issued	156		
Notifiable Infectious Diseases,	Tables of	Tables, General	6 to 21
Tables of	39, 69 to 62	Tuberculous Diseases, Deaths from	8, 9, 16, 17, 19, 36, 37, 75 to 81, 114a and 114b
Nuisances, Inspection and	Abatement of	Tuberculous Phthisis, Deaths from,	in houses of various rentals
Abatement of	156 to 161	Tuberculous Phthisis, Table of Cases of,	in Municipal Sanatorium 114a, 114b
Offensive Trades	147	Tuberculosis and Occupation	78
Old Age, Deaths from	10, 11, 16, 86, 87	Tuberculosis, Deaths of Males and	Females from, analysis of
Open-air Treatment for Cases of	Infectious Disease	Tuberculosis Order of 1909	144, 145
Infected Disease	46, 107 to 109	Tuberculosis, Public Health Regula-	tions, 1908
Outworkers	139, 140, 159	Vaccination	40 to 42, 165
		Venereal Diseases	8, 9, 73, 74
Pail-Closets	5, 51 to 53, 56, 57, 62, 63, 161, 172, 174, 175	Violence as a Death Cause ..	14 to 16, 98, 99
Parturition, Accidents of, Deaths	from	Vital Statistics, General	23 to 37
from	12, 16, 97, 98, 136 to 138	Wharf Superintendent, Report of	172 to 178
Population	4, 6, 20 to 24, 32, 36	Whooping-Cough	4, 8, 9, 16 to 19, 35, 36, 38, 39, 50, 51, 72
Population, Sex of	24	Workshops	138 to 141, 158 to 160, 165, 166, 168
Premature Birth, Deaths from	10, 11, 16, 84, 85		
Prosecutions	154, 155		
Public Institutions, Deaths in	6, 100		
Puerperal Septicæmia, Deaths from	8, 9, 16, 70 to 72, 74, 97, 98, 137		
Rainfall	39, 60, 61, 65 to 68		
and Terminal Chart			
Ratable Value	22		
Refuse Destructors	175		
Refuse, Disposal of	5, 52, 53, 56, 57, 172 to 177		
Registration Sub-Districts	32 to 37, 42, 46, 48a, 49, 50, 56a, 59, 64		